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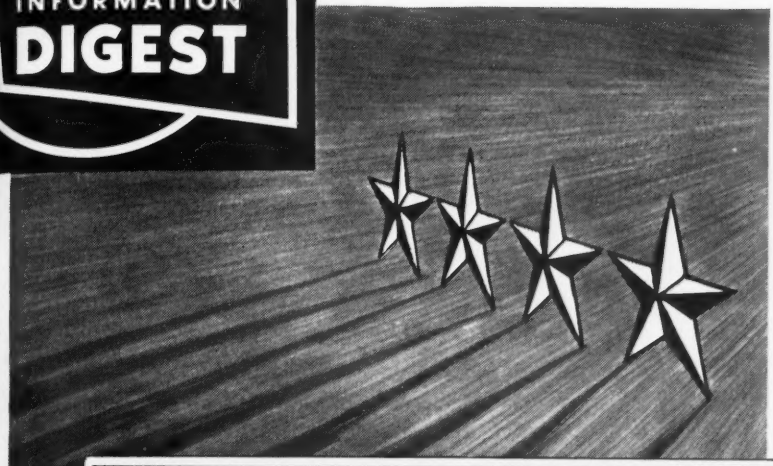

THE CHIEF OF STAFF REPORTS

A SPECIAL ISSUE

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THE OFFICIAL U. S. ARMY MAGAZINE

ARMY INFORMATION DIGEST

THE OFFICIAL MAGAZINE of the DEPARTMENT OF THE ARMY

The mission of ARMY INFORMATION DIGEST is to keep personnel of the Army aware of trends and developments of professional concern.

THE DIGEST is published under supervision of the Army Chief of Information to provide timely and authoritative information on policies, plans, operations, and technical developments of the Department of the Army to the active Army, National Guard, and Army Reserve. It also serves as a vehicle for timely expression of the views of the Secretary of the Army and the Chief of Staff and assists in the achievement of information objectives of the Army.

EDITOR
Lieutenant Colonel Leilyn M. Young

ASSISTANT EDITOR
Major Edward F. Keevan

PRODUCTION EDITOR
Captain Harry E. Olmsted

SENIOR ASSOCIATE EDITOR
Samuel J. Ziskind

ASSOCIATE EDITORS
Joseph F. Bierstein, Jr.
Owen J. Remington

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IN AN ARMY where lead time and developmental cycles are measurable in years, the Army's capability for deterring or winning any war of the immediate future directly depends on the achievements—in planning, training, research—that have been wrought in the recent past. The past two years have been decisive ones in shaping the structure and capability of tomorrow's Pentomic Army. In his Biennial Report in this issue, the Chief of Staff records the many advances on a multitude of fronts which, taken together, spell increased effectiveness for national defense.

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NG & USAR: Same as Active Army.
For explanation of abbreviations used, see AR 320–50.

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SEPTEMBER 1957

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Number 9

A Special Issue:

Biennial Report

of

THE CHIEF OF STAFF, UNITED STATES ARMY

1 July 1955 to 30 June 1957

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UNITED STATES ARMY
THE CHIEF OF STAFF

30 June 1957

Dear Mr. Secretary:

It has been two years since I assumed the duties of Chief of Staff of the United States Army, and I believe it appropriate to review the operations and activities of the Army during that spread of time. The report which follows records the progress the Army has made under your leadership during a period of transition in the art of warfare requiring the modernization of military forces as rapidly as possible within the limits of our means.

The report takes as its starting point the philosophy of deterrence which guides the Army in developing its programs. Then, within a functional framework -- operations and training, research and development, personnel, logistics and management, and informational activities -- it outlines the measures taken by the Army to generate increased deterrent strength in support of our national aims.

I trust that this document will prove of interest and assistance to you in evaluating the status of the Army and as a partial record of its accomplishments since 30 June 1955.

Sincerely,

Maxwell D. Taylor

MAXWELL D. TAYLOR
General, United States Army
Chief of Staff

The Honorable Wilber M. Brucker

The Secretary of the Army

I.
DEVELOPMENT OF BASIC GUIDANCE FOR ARMY PROGRAMS

AT THE outset of the period of this report, the Chief of Staff gave guidance to the Army Staff in the form of a National Military Program which has been subsequently used to form the basis of recommendations to the Secretary of the Army in the development of Army programs. This document provides the Army with a point of departure for determining its budget, force structure, and day-to-day operational requirements. The thinking contained therein is outlined in the subsequent paragraphs.

Security as a goal can be attained through a national military program based on deterrence. Such a military program, to be truly adequate, must be integrated with all other national programs and must have as its basic objective the maintenance of military strength capable of providing tridimensional deterrence—in the air, on the land, and on and under the sea. This military strength

must be flexible and versatile, that is, capable of adjusting itself to the various military situations which our Nation may be called upon to face.

The primary purpose of all military activities bearing upon security is to prevent general atomic war. It is an inescapable fact that such a war would be an irreparable disaster to all participants, that no true victor can emerge. However, as both sides in the bipolar world accept this fact, it becomes increasingly unlikely that either side will deliberately embark on a war which would end in reciprocal annihilation. Certainly the United States would never be the aggressor. However, that does not mean that Communism will renounce aggression as a tool of policy.

Inherent in the nature of the Communist movement is a need for dynamism if it is to continue as a significant world force; therefore, the threat of subversion and local aggression tends to become the most serious threat to world peace. These forms of attack are particularly dangerous, because the small aggression, if not arrested, may lead to the piecemeal erosion of the Free World, and if resisted, must be defeated promptly, otherwise the smoldering "brush fire" may lead to the general conflagration—the general atomic war which it is our purpose to avoid.

Consequently, we should place immediately after the deterrence of general war the mission of deterring, or winning quickly, any local aggression which may break out about the world. Only after meeting these requirements are we justified in extending our preparations to hedge against the failure of deterrence and to face the disastrous consequences of general atomic war.

Against the foregoing background, what should be the elements of a national military program of deterrence designed, in order of priority, to deter general war, to deter or win local war, and finally, to win a general war?

At the head of an adequate program must be the maintenance of military technological superiority over the Communist bloc. In view of the evidence of Soviet progress in this field, we can never afford to be complacent about our own successes.

As to specific military requirements, the United States must have sufficient long-range aircraft to convince a potential aggressor that if he launches a surprise attack, we can retaliate with devastating counterblows. Concurrently, the ability to strike hard and decisively against the sources of enemy strength must be complemented by an adequate continental air defense system to discourage the enemy from believing that by a surprise attack he can destroy our homeland. We must also have abroad in areas of strategic importance, as in Europe and Korea, United States forces to serve as a reminder that any aggression in these vital areas will be met at once by the armed might of the United States.

In addition, we must have reserve strength, in being here at home, coupled with the necessary air and sea transport, so that we can move quickly to any threatened part of the Free World. Furthermore, the deterrent effect of our own combat forces must be extended by that of Allied forces. This indigenous strength, in the ag-

gregate, is an important asset, particularly as a deterrent to Communist subversion and local aggression.

If adequate provision is made for the foregoing requirements, the United States will have a balanced military program capable of being fitted into an integrated national strategy. If these requirements are fulfilled, the Nation will have a visible and powerful capability for deterring war, both general and local, and for winning local war quickly. It will also have made reasonable provision for the support of operations, if the deterrent fails.

The Army considers the following requirements essential to the effective implementation of its role: the maintenance of technological superiority over the Communist bloc, the overseas deployment of combat strength; the Strategic Army Forces; the Army Air Defense Command; the National Guard and the U. S. Army Reserve; and allied army forces supported by United States military assistance.

Based upon the foregoing requirements, the Army has three goals:

1. A combat-ready Army trained to fight all types of war.
2. The largest and best Army within the limits of appropriations.
3. A forward-looking Army.

Command Guidance

In providing direction to strengthen the over-all Army effort in its contribution to national defense, command guidance must be provided to insure that leaders in all ranks apply the fundamental principles which govern Army operations and administration. It is essential that every segment of the Army live true to a set of principles which are reflected in day-to-day leadership, training, and routine. Consequently, as guidelines to assist all officers, the Department of the Army has enunciated the "principles by which the Army lives." Continuing efforts must be exerted to have the Army recognized by the soldier and civilian as a military society with a personality and ethos in consonance with these principles:

1. The Army is in the first line of defense of the United States. By its overseas deployments it presents to the enemy the United States soldier as an initial obstacle to his aggression, covering the forward bases of the three Services.

2. The Army is the versatile member of the defense team with a flexible system of weapons at its command. While possessing atomic weapons of great power, it retains the ability to vary the application of military force to the needs of the moment, to make "measured" rather than "mass" retaliation.

3. The Army is a progressive Service, looking steadily ahead to the future. While respecting experience and avoiding fads, the Army concerns itself with the next war, not the last one.

4. The Army respects its civilian leadership and traditionally abstains from any suspicion of involvement in politics. It respects the role of Congress, and responds quickly and accurately to the legitimate requests of its members.

5. The Army, by the nature of its requirements, attaches the greatest importance to human values. It recognizes man as the basic element of military strength. Hence, it works constantly to improve the

moral, physical, and intellectual capacity of its men. It creates for them an environment of decent, clean living and of intolerance of vice, dissipation, or flabbiness.

6. In the Army, authority imposes its weight by the professional competence of its leaders rather than by the arbitrary or despotic methods of martinets. Second only to accomplishing his military mission, the officer's duty is to the welfare of his men. Rank is a badge of responsibility, not of privilege.

7. Because of the essentiality of its mission and the complexities of its tasks, the Army must have its share of the best manpower. It offers a worthwhile career for every talent.

8. The Army strives to get the most defense for the money from the resources provided to it. It spends its money prudently for the essentials of defense in accord with good business practices. It is constantly self-critical, trying on its own initiative to uncover inefficiency and malpractice.

9. The Active Army is aware of the importance of the civilian components and supports wholeheartedly the program to strengthen and improve them. It insists, however, on getting a fair return in efficiency and combat readiness.

10. In its inter-Service relationships, the Army is a loyal member of the national defense team, resisting encroachments on its own legitimate responsibilities, but scrupulously avoiding trespass on those of the other Services. It is open-minded, and will listen to reason on any subject.

11. The Army does not forget its old soldiers after they retire. It remains interested in their welfare, and wants them to serve in their civilian communities as loyal, informed representatives of the Army.

Related to the establishment of the "principles by which the Army lives" is another new program designed to keep major commanders informed of matters of top level mutual interest. Commanders at army level and above receive periodic letters discussing in detail the Army's position on issues affecting national security together with significant developments which will have an impact on the Army. Thus, key officers, Army-wide, obtain the direction needed to carry out more effectively their portions of the Army's mission.

II.
ARMY OPERATIONS AND TRAINING

DURING the period of this report the activities of the Army related to operations and training involved the following primary tasks:

a. To reorganize the infantry, airborne, and armored divisions in consonance with the requirements of atomic warfare.

b. To maintain the combat readiness of overseas deployments.

c. To assure that the Strategic Army Forces maintained in the United States are prepared to discharge their mission in general or limited war.

d. To provide antiaircraft units capable of coping with the air threat to the continental United States and to our overseas deployments.

e. To increase the readiness of the reserve components in order that they may make a significant contribution to the discharge of Army tasks in the first six months of war.

All of these foregoing tasks are contributory to the Army's deter-

rent role as a part of national defense. Beyond these requirements to maintain a deterrent posture, the Army conducts numerous other operational activities reflected in its training program and school system and the development and testing of organizations, tactics, and techniques.

Division Reorganization

After more than a decade of study and tests the Army began the major reorganization of its main combat forces—the infantry, airborne, and to a lesser extent, the armored divisions. The new structure improves the Army's ability to fight effectively under conditions of atomic warfare without losing the capability to conduct conventional warfare.

The atomic battlefield of the future will be wider and deeper than battlefields of the past. There will probably be a checkerboard disposition of units with considerable gaps between combat elements. Consequently, Army units are being organized and trained for all-around combat.

The problem of the ground commander will be to find the enemy, to determine his configuration, and then to destroy him by directing conventional or atomic fire upon him, using his own organic weapons or calling down the fires of missiles deployed well to the rear. Thereafter, the commander will need instant mobility to exploit the effects of this destructive fire.

Insofar as organization patterns can assist, the new divisions are designed to accomplish these difficult tasks.

The Army now has a completely air-transportable airborne division. With a strength of 11,486, in contrast with the 17,087 of the old airborne division, the major features are: Five battle groups as opposed to the conventional three. Each battle group has a headquarters company, a mortar battery, and five rifle companies. A major reorganization of the division artillery provides an atomic-capable Honest John rocket battery and five batteries of 105mm artillery.

The new infantry division has a strength of 13,748—3,707 less than the old triangular division. There are five battle groups, administratively self-contained and air-transportable units organized essentially like the groups in the airborne division. The division retains its tank battalion, but the battle groups lack the tank companies that were common to the former regiments. A reconnaissance battalion replaces the former reconnaissance company to employ fully the division's nuclear firepower, and the artillery is completely reorganized to include an atomic capability.

While the infantry and airborne divisions required major reorganization, the armored division, with its armor-protected mobility and its favorable firepower-to-manpower ratio, is well suited for the mobile, dispersed type warfare envisioned for the future. However, the division artillery now has an atomic capability.

The new infantry and airborne divisions have the following advantages over their older counterparts: increased front-line fighting strength; increased mobility through Army Aviation and cross-country vehicles; atomic capability in the artillery; and greatly improved firepower.

With regard to the reduction in divisional strength, this will not reduce the Army's over-all personnel requirements for there are offsetting factors. First, taking out those elements which are not habitually employed at division level requires that elements such as antiaircraft artillery, motor transport, and armor be pooled at higher level. Secondly, new complicated weapons create a need for new types and quantities of service support. Thirdly, as the logistical system is dispersed to reduce its vulnerability to nuclear fire, more people are required to operate small, scattered supply installations. Finally, other personnel savings will be used in the newly designed missile commands.

During FY 1957, seven of the Army's infantry, airborne, and armored divisions completed reorganization. The new division structures are being phased in to insure the Army's over-all combat readiness. By 1 July 1958, all divisions will be reorganized along Pentomic lines.

Overseas Deployments

With some 40 per cent of its members overseas, the Army maintains its deployments on an indefinite basis, facing the Communist bloc along the Iron and Bamboo Curtains. The presence of these forces encourages our allies and, as strength in being, they serve as a constant reminder that aggression in these vital areas will be resisted by the armed might of the United States.

For the period covered by this report, the over-all strength of officers and men overseas declined. At the beginning of the period, of the Army's 20 divisions (14 infantry, 4 armored, and 2 airborne divisions) four infantry divisions and one armored division comprised the Seventh Army, our NATO commitment in Germany. In July 1955 the Corporal guided missile, Honest John rocket, and 280mm gun provided the Seventh Army's atomic capability.

On the other side of the world, the Army had two divisions in Korea, a division and a regimental combat team in Japan, and a regimental combat team on Okinawa. The 280mm gun with an atomic capability supported the forces in this area.

Rounding out our overseas deployments, a division was stationed in Hawaii, while Army forces in Alaska and the Caribbean consisted of a division minus a regimental combat team in each area.

During the two-year period commencing 1 July 1955, a reduction in troop strength necessitated a realignment of forces. Over-all, the Army inactivated three infantry divisions and reduced its total divisional strength to 18. However, by adding an airborne division and retaining the same number of armored divisions, the Army lost a smaller proportion of its firepower and mobility.

During the period, commensurate with their important NATO role, our forces in Europe continued to receive the highest priority in personnel and equipment. An airborne and an armored division replaced two infantry divisions, thereby improving the firepower and mobility of the Seventh Army. Additional Corporal battalions were deployed to Europe, and the conversion of Honest John bat-

TRAINFIRE I
• INDIVIDUAL RIFLE MARKSMANSHIP TRAINING 1st 4 WEEKS BASIC.
TRAINFIRE II
• SQUAD TRAINING-RIFLE MARKSMANSHIP 2nd 4 WEEKS BASIC.
TRAINFIRE III
• SNIPER-ADVANCED MARKSMANSHIP TRAINING A.T.P. 7-200.
TRAINFIRE IV
• SNIPER TRAINING WITH Specialized EQUIPMENT.

"Study and tests resulted in Trainfire, the improved concept of rifle marksmanship."

teries into battalions was started to increase ground firepower.

By 30 June 1957 Far East Command Headquarters was abolished, and our strength in the Far East was reduced by two regimental combat teams. A corps headquarters and two divisions in Korea together with one reduced-strength division in Japan make up our Far East forces today. The Honest John rocket added to the atomic capability already provided by the 280mm gun.

As for other overseas deployments, Army strength in the Caribbean was reduced to a regimental combat team while force levels in Hawaii and Alaska remained unchanged.

U.S. Strategic Army Forces

To reinforce our overseas combat forces or to be deployed to a trouble spot anywhere in the world are the Strategic Army Forces (STRAF) maintained here in the United States. The eight divisions of this combat-ready element of the Army represent the reinforcements a potential enemy would encounter shortly after the outbreak of general war or local aggression. Additionally, a sizable portion of these forces is maintained in a high state of readiness for immediate deployment in a crisis. Consequently, the Strategic Army Forces have only a slightly lower priority in men and equipment than our NATO divisions.

The present composition of the Strategic Army Forces reflects the Army's lower manpower ceiling. On 1 July 1955 there were nine Regular Army divisions (four infantry, three armored, and two airborne) and, in addition, five regimental combat teams. Today, the eight-division STRAF has one less armored division—which replaced an infantry division when it was deemed essential to provide the Seventh Army with additional armor—and one less airborne regimental combat team which was integrated into the 101st Airborne Division. In addition to the internal strengthening of the units in the Strategic Army Forces, another significant change has been the addition of two missile commands to this component of the Army.

The Army in Air Defense

Another important contribution to deterrence is the Army Air Defense Command, charged with the

antiaircraft defense of the United States. Operating as a part of the Continental Air Defense Command, units of the Army Air Defense Command are on continuous duty, prepared to counter a surprise enemy air attack.

The Army contribution to air defense is represented largely by surface-to-air missile batteries, presently armed with Nike-Ajax missiles which provide protection for many major cities and important industrial areas.

The present Nike-Ajax missile can successfully bring down any current type of aircraft. In order to counter successfully the air threat of the future, the Nike-Hercules, capable of being armed with a nuclear warhead, is now being readied to replace progressively the Nike-Ajax. While the Army still has a number of antiaircraft gun batteries in position, they will be eliminated and replaced in the near future with missile units.

Nike on-site units today almost double the number which were on-site two years ago. Also, on-site equipment is being modified and necessary construction initiated to facilitate the changeover to the Nike-Hercules weapon.

Reserve Components

Behind active Army units at home and abroad, the Nation requires an effective reserve of civilian soldiers. Since the United States can never afford to have all of the active military units required for a total military effort, it must possess a back-up of reserve units and individuals ready for emergency employment. In contrast to World Wars I and II, however, any future conflict of equal proportion will not allow us to arm deliberately behind the protection of our allies. The day of deliberate mobilization and unhurried training is past—the accent is on readiness on M-day or as shortly thereafter as possible.

On 1 July 1955 the strength of the National Guard was 358,241 officers and enlisted men. Although the Guard possessed considerable strength, it had a serious backlog of men who lacked the individual and unit training essential for survival and tactical team play on the battlefield.

Strength-wise, during the past

Cadets at U. S. Military Academy go through rigid courses of instruction before becoming Army officers.

two years the National Guard gained 66,759 for a total of about 425,000. The increase resulted primarily from the Guard's own recruiting efforts. Training facilities were improved by an increase of 329 armories plus numerous non-armory training facilities. In addition, the Guard began receiving modern equipment such as new tracked vehicles, observation helicopters, and utility aircraft. Turning to air defense, Guard units replaced the active Army at 105 antiaircraft gun sites. Also, the 720th AAA Gun Battalion, as a test vehicle, began training to take over four Nike battery sites around Los Angeles.

As a result of the implementation of early mobilization plans, combat potential of the National Guard was increased. Under this plan, designated divisions and combat support units received priority in equipment and personnel to prepare them for early deployment in the event of war. Equipment for full mobilization not in the hands of units is stored in nearby depots. Individual soldiers from the Army Reserve were earmarked for assignment to the National Guard in an emergency in order to bring these priority National Guard units up to mobilization strength.

"Field exercises coupled with annual combat battalion tests help insure combat readiness of the Army's tactical units."

As of 1 July 1955 the Army Reserve had about 168,000 officers and men participating in drill periods. A lack of adequate training facilities and equipment hampered units in attaining the desired state of readiness. A major weakness in the Army Reserve was its lack of participating enlisted strength.

During the past two years, the strength of reserves participating in armory drills was increased by more than 93,000; USAR training centers by 98. A number of U. S. Army Reserve units—participating in either the early mobilization plans or the round-out program which provides units to fulfill the operational requirements of the active Army in the event of emergency—received equipment and personnel priorities.

In addition, the Army conducted a nation-wide screening of personnel to improve the Army Reserve's readiness by eliminating those members who will not be available for active duty in the future. Men available for active duty were placed in the Ready Reserve; of those who did not meet the necessary qualifications, about 500,000 have been discharged, and approximately 700,000 have reverted to a standby status.

The reserve forces—the National

Guard and the Army Reserve—face the same controlling factor as all military forces: adequate and competent manpower. Today reserve units receive a continual flow of men with sufficient training to allow them to survive on the battlefield and have a reasonable knowledge of their unit duties and the importance of teamwork. The requirement for Selective Service men returning to civil life after two years of service in the Army to serve in the Ready Reserve, and the mandatory six months active duty training program for National Guardsmen provide the trained manpower needed to improve the mobilization readiness of the reserve forces.

The Army requires air transportation to conduct effective combat operations and . . . solve increasingly complex supply problems.

Assistance Rendered to Other Armies

The deterrent effect of Army combat forces overseas is extended by that of indigenous armies of the Free World. Through the Military Aid Program, the Army assists in the development of over 200 foreign divisions. Although these divisions vary in combat capabilities, they constitute, as a minimum, a deterrent to the Communist techniques of infiltration, subversion, and coup d'etat. Elsewhere, as in the NATO nations, these allied divisions contribute essential strength to the defense and security of strategic areas.

Our present Military Aid Program had its inception in 1947 when the Army sent officers and men to assist in the training of the Greek and Turkish Armies. Since that time the program has involved an increasing number of countries. Today the Army is helping to train the ground forces of 43 countries.

The total Army manpower engaged in this work, however, amounts to only about 6,000 officers and men. The important consideration is the quality of these personnel, as they must be chosen on the bases of their skills and their ability to teach indigenous soldiers. This small group of Americans has helped create strength where otherwise a power vacuum would exist.

During the past two years the major changes in military missions and aid groups included the formation of MAAG Germany to assist in building the new German Army; a major reduction in strength on Taiwan reflecting successful performance in training Nationalist Chinese forces; and TERM, a temporary mission to assist MAAG Viet-Nam in its over-all logistical efforts including the outshipment of surplus equipment resulting from hostilities in Indochina.

Modern Day Training

The training of military personnel is a continuous and large-scale operation. The Army operates six major training centers to fit the individual soldier for his role in a unit. To provide higher level military training, the Army operates 35 schools ranging from the Army War College to the branch schools —such as Infantry, Armor, and Artillery. In addition to recruit training and advanced schooling for officers, the Army conducts extensive unit training, maneuvers, and tests.

During the past two years the Army graduated 315,000 soldiers from its service schools and colleges. Additionally, about 600,000 Americans completed recruit, or basic, training during the same period.

The training required for the expanding technical skills mandatory in a modern Army is increasingly important and complicated. The process of training a new Nike battalion provides an example of how modern-day training is planned and executed.

Almost a year before the missiles are manned at the site, qualified soldiers arrive at the U. S. Army Air Defense School, Fort Bliss, Texas, for a 42-week technical school course of instruction. These men form the "hard core" or cadre of the unit to be formed. Eight weeks before their school period ends, another cadre assembles and undergoes "troop training" in the less complicated equipment of the new unit. After the school courses end, both cadre elements are "married-up," and they undergo *unit* training leading up to the conduct of actual practice firing with missiles at Red Canyon Range, New Mexico. Then, they are sent to their permanent Nike site so as to reach there at the same time their weapons and equipment arrive.

Thus, more than a year in advance, both the production and transportation of equipment and weapons must be coordinated with the training of men. Of course, all training is not this complex; however, as technology advances, it certainly will tend to become more complicated in the future.

Field Exercises

As an advanced form of training, the Army conducted four major field exercises in the fiscal year starting 1 July 1955, with over 120,000 soldiers participating. Exercise LODE STAR furthered our knowledge about fighting in mountains and cold weather. ARCTIC NIGHT was a joint Army-Air Force exercise under arctic conditions. Exercise MOOSE HORN, a counterpart to the previous year's test airlift to "reinforce" troop units in Alaska, tested the feasibility of an overland movement between the United States and Alaska.

SAGEBRUSH, held in 1955, was the largest joint exercise conducted in the United States since World War II. It was a fruitful maneuver test. The maneuver created a theater scale setting in which simulated atomic, chemical, biological, and electronic weapons were extensively employed. The purpose of this large exercise was to develop further and test Army and Air Force units, tactical concepts, weapons, techniques, and organization for combat under conditions of atomic, conventional, and psychological warfare. By this means the Army was able to con-

duct a full-scale test of its new concepts of unit organization designed to meet the requirements for the atomic battlefield.

The results were profitable. For example, this exercise provided valuable lessons in the conduct of tactical operations under atomic conditions; confirmed earlier conclusions regarding the unsuitability of air-delivered atomic weapons for close atomic support of ground forces; and confirmed the view that the Army will have a declining requirement for close air support in the coming years as missiles and rockets, which can provide increasing proportions of this support, are integrated into the active forces.

In 1955 the Army tested in Exercise SAGEBRUSH the ingredients, concepts, and lessons it had developed to that time. "Sky Cavalry," combat television, and many other new techniques were tried out in maneuver situations and conditions simulating nuclear war. Over-all, the maneuver was a final test of the Army's ideas and concepts that had been developed over a ten-year period. The maneuver test was successful, but it pointed up new problems, particularly the dangers of radioactive fall out.

Between July 1956 and June 1957 the Army conducted seven other major field exercises involving approximately 62,000 troops. These exercises, ranging from the jungle and arctic to atomic types, were as follows:

RED ARROW was a division exercise consisting of three regimental combat team exercises conducted at Fort Riley, Kansas. SLEDGE HAMMER featured tests of "Sky Cavalry," and assault pipeline and bulk POL resupply for armored division units. RIO SELVA, a battalion combat team exercise, provided field training in jungle operations and the reinforcement of the Caribbean Command from the continental United States. KING

"Nike-Ajax missiles . . . provide protection for many major cities and important industrial areas."

COLE was a command post exercise conducted in the field and designed to train staffs and participating units in new tactical concepts, organization, and techniques adopted by the Army. COLD SPOT was a training exercise in mountain combat operations. In DESERT ROCK VII and VIII a series of actual atomic weapons were exploded in an Atomic Energy Commission test series. Selected personnel and units participated in orientation and tactical exercises in conjunction with these tests. CARIB-EX was a joint Army-Navy-Marine-Air Force exercise in which Army participation featured an airborne assault followed by an air landing and build-up of forces subsequent to offensive operations.

Overseas, during the past two years, units of the U. S. Seventh Army in Germany participated in three field training exercises, eight command post exercises, and one war game. All of these were over and above the normal training conducted by the five divisions and supporting forces. In the Far East, the two divisions in Korea schedule monthly exercises to insure operational readiness, and a minimum of one corps CPX per quarter is held.

Thus, field exercises coupled with annual combat battalion tests for every infantry, artillery, armored, and engineer combat battalion help insure the combat readiness of the Army's tactical units.

The Combat Developments Experimentation Center

Over and above conducting exercises and field tests, the Army has a requirement for a continuing evaluation of its organization, tactical concepts, and weapons and equipment. Consequently, on 1 November 1956, the Combat Developments Experimentation Center at Fort Ord, California, was established. In order that an adequate number of personnel would be readily available for testing, the Combat Developments Experimentation Center was reorganized on 1 June 1957 to provide a strength of 3,055. Here, a small group of highly qualified soldiers and scientists, freed from the multiple testing objectives common to most maneuvers, attains maximum objectivity and directs all of its efforts toward the singular purpose of preparing, conducting, and evaluating concepts, organizations, and doctrine for future combat.

Although tests include the determination of the best way to inte-

The 280mm gun provides atomic capability both in Europe and in the Far East.

grate weapons systems and equipment into organizations, the group does not develop and test the hardware itself. Instead, it evaluates the impact of new weapons and equipment on combat operations and helps determine the most effective combinations of manpower, weapons, and equipment under the anticipated conditions of the future battlefield. During FY 1957, tests included the development of the most effective combination of infantry, armor, and engineer elements when integrated into a combat unit.

The concentrated efforts of the Combat Developments Experimentation Center will help insure a sound basis for determining organizational patterns and tactical doctrine best suited for future war with savings in time, effort, manpower, and money.

Individual and Small Unit Training

In addition to the exercises and tests which are designed to train and to evaluate commanders, staffs, and unit structure under atomic conditions, the Army has placed additional stress on the realism of individual and small unit training. During the past two years the Army continued to place its training programs under scrutiny and has instituted changes which increase individual proficiency in less training time.

One of the new procedures developed to increase the fighting quality of American soldiers is Trainfire I, a more realistic and rapid instructional method for basic rifle marksmanship training. The new system provides for target detection and range estimation, leading to improved day and night firing. In Trainfire the soldier, after obtaining his 250-yard battle sight setting, fires under simulated battlefield conditions at electronically controlled, silhouette targets. When the marksman hits a target, the "enemy" falls to the ground just as he would in combat. Tests now concluded at Fort Jackson and Fort Carson have indicated that this training, when expanded to include squad firing and night patrols, will improve individual and small unit training, thereby increasing the battlefield proficiency of infantrymen.

U. S. Military Academy

The Army has found that a blended proportion of Military Academy and ROTC college graduates best meets the requirements

An 8-inch howitzer lends support to the infantry during a field training exercise.

of its professional officer corps. With regard to West Point, the authorized strength of the Corps of Cadets prior to World War II was 1,960 to support an Army of 167,700. Today, the Corps' authorized strength of 2,496 produces only about 30 per cent of the new regular officers needed in the basic branches of the expanded regular officer corps. Since, in times of peace, not less than 50 per cent of the annual procurement of regular officers should be Academy graduates, the Army objective is not being realized.

During the past two years efforts were made to maintain the Corps at full strength. In order to attract young men of the caliber required in the officer corps of the Army, the Cadet Information Program was centralized at West Point under the Registrar. Previously, the information effort was scattered among several Department of the Army agencies. Placing the Program under Military Academy authorities will provide wider dissemination of an accurate picture of West Point, thereby helping to attract more young men, both in quantity and quality, to military careers.

Another step taken since 1955 has been the improvement of physical facilities at West Point. The conversion of the old Riding Hall to an Academic Building, scheduled for occupancy by September 1958, will permit the optimum number of cadets in each classroom. Future plans call for cadet barracks to replace the West Academic Building as part of a long-range program to provide more adequate living quarters for cadets.

Other accomplishments during the past two years include the following: the initiation of a study to determine the maximum capacity of the United States Military Academy; the move of the USMA Preparatory School from Stewart Air Force Base, Newburgh, New York, to Fort Belvoir, Virginia; and the expansion of cadet training to include familiarization with the Nike antiaircraft missile.

Army Aviation

The Army is seeking greater mobility on the battlefield. As a consequence, it is placing increased emphasis on the development of air-transportable ground vehicles and is expanding its aviation program. Army Aviation is designed to provide Army forces improved mobility and operational flexibility through exploitation of the air medium. The Army's aircraft are not consolidated into an "air force," but rather are found throughout the combat arms and services. Army aircraft are utilized to adjust fire, to expedite reconnaissance, to move supplies, and to evacuate wounded. Particularly on an atomic battlefield with its great dispersion of units, the Army requires air transportation to conduct effective combat operations and to help overcome the increasingly complex supply problems.

By 1 July 1955, the Army Aviation program had made considerable progress. Aircraft totaled 3,787 with 2,546 fixed-wing and 1,241 rotary-winged craft. The Army had 3,097 pilots. By June of 1957 the Army had 4,504 planes, 2,569 fixed-wing and 1,935 helicopters, and 4,964 pilots. In addition, the Army acquired additional air fields at Wolters and Gary, both in Texas, and is currently using civilian instructors to conduct fixed-wing and

helicopter primary training for its new pilots.

Organization

An examination of the Army's organization led to structural changes in the Army Staff and within tactical units. With regard to the Army Staff, it was found that with 20 of the 28 key staff officers reporting directly to the Chief of Staff in 1955, the span of control exceeded the maximum recommended even by the most liberal theorists. The Staff was realigned in January 1956 by the appointment of three Deputy Chiefs of Staff (Personnel, Operations, and Logistics) and a Chief of Research and Development and Comptroller at the deputy level. In addition, a Coordination Group and a Programs and Analysis Group were formed in the Office of the Chief of Staff. These two new groups insure that all Army programs are coordinated and that they are being carried out in accordance with the intent of the Chief of Staff.

This over-all reorganization reduced to 11 those reporting directly to the Chief of Staff. As a result of this reorganization, the high command of the Army can focus its attention on the critical problems, and its flexibility and ease of response are more effective.

More striking than the reorganization of the Army Staff, however, was the regroupment of the 101st Airborne Division. As stated previously, the Army, over a period of several years, had tested a number of new concepts which would improve the firepower and mobility of its divisions in atomic war. In February 1956, the decision was made to reorganize the 101st Airborne Division under the Pentomic concept to undergo tests. A study of the new reorganizations within the 101st Airborne Division contributed to the subsequent reorganization of all infantry and airborne divisions.

When the Army closed out its forces in Austria in October 1955, another organizational change occurred. At that time, the Army created the Southern European Task Force (SETAF), based upon an Honest John battalion and two armored infantry battalions. Later, two Corporal battalions further increased its firepower. This command has the mission of providing special weapons support for Italian forces protecting the passes through the Alps. This missile command is capable of providing atomic fire support from Switzerland to the Adriatic. Based on the SETAF prototype, the Army is forming additional missile commands and plans to add several missile commands of varying types to its structure.

Over-all, the Army has endeavored to refine and perfect both its administrative and its tactical organizations so as to achieve improved efficiency and economy. In sum, the Army has made considerable progress in reorganizing its combat forces for atomic warfare.

III.
PROGRESS IN RESEARCH AND DEVELOPMENT

THE steady technological progress evidenced by the Soviet Union in the further improvement of its military weaponry and equipment presents a serious challenge to our own research and development effort. To insure success in any future conflict, the Army is continuing to modernize its forces.

Since the Army may be called upon to fight any type of conflict ranging from general atomic war to a limited one, its ability to enter the battle area, exist, fight, and emerge victorious requires the vigorous development of four essential ingredients to success in battle—firepower, mobility, communications, and capacity for sustained combat. Maintaining superiority in these four elements is the research and development goal. The Army has set forth its R&D objectives for major weapons and equipment intended for use during the period up to 1970. Within this long-range goal framework, significant progress has been made over the past two years.

Firepower

The Army must hold and improve its current advantage of being able to deliver atomic fires. To insure this lead, the continued development of a wide range of low yield tactical atomic weapons is being effected. In addition, a concurrent objective is to obtain increased killing power with non-atomic weapons. Thus, the Army retains the capability to use either atomic warheads or conventional firepower, as the situation requires.

Surface-to-Surface Missiles and Rockets

The Army's requirements for modern surface-to-surface weapons extend from the short-range weapons for use against enemy armor and fortifications to those which supplement or increase the range and firepower of conventional artillery.

The Dart, which is just being placed into production, is a guided missile designed to cope with enemy tanks and field fortifications. Another newcomer to the Army's expanding guided missile family is the Lacrosse. This mobile general support weapons system has been developed to provide close support to the infantry in attacks on ground targets.

While the Dart and the Lacrosse are weapons systems of the near future, the Corporal is now in operational Army units. This ballistic missile system is capable of delivering atomic firepower on targets at ranges of approximately 75 miles.

The Honest John free rocket, another weapon in operational units, is a simple, reliable, all-weather weapon which provides a basic firepower element for Army divisions and missile commands. Presently in the development stage, Little John is an air-transportable free rocket designed to be much smaller and lighter than Honest John.

Over the past two years, flight tests of the Redstone missile have met with significant success. When completed as a ballistic weapons system in the near future, Redstone will provide an accurate atomic delivery system to ranges of approximately 200 miles. It will have an all-weather, around-the-clock fire support capability, invulnerable to electronic countermeasures, and responsive to the ground commander's requirements. Redstone combat units are now being trained prior to the integration of operational units into the Army's combat structure.

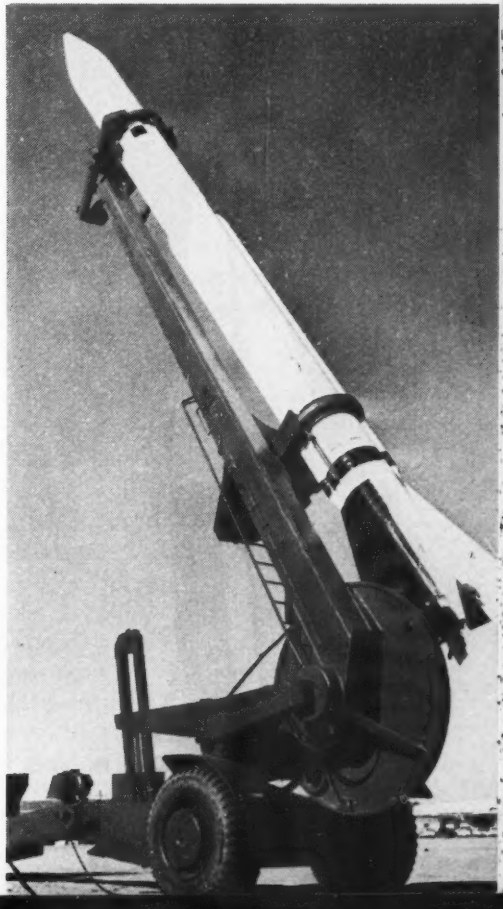
The Jupiter missile program was undertaken jointly with the Navy late in 1955. In February 1956, the Army Ballistic Missile Agency, utilizing a skilled development team of civilian and military scientists, was organized at Redstone Arsenal, Huntsville, Alabama, to complete the Redstone development and to develop Jupiter on an expedited basis. Late in 1956 the Navy withdrew from the Jupiter program; however, collaboration between the two Services is continuing on portions of the program which are of mutual interest.

In November 1956, the Secretary of Defense assigned to the Air Force operational responsibility for missiles with ranges over 200 miles. This placed the Jupiter in the category of an Air Force system from an operational viewpoint; however,

"The Dart is designed to cope with enemy tanks and field fortifications."

"Presently in the development state, Little John is an air-transportable free rocket."

"Another newcomer to the Army's expanding guided missile family is the Lacrosse."



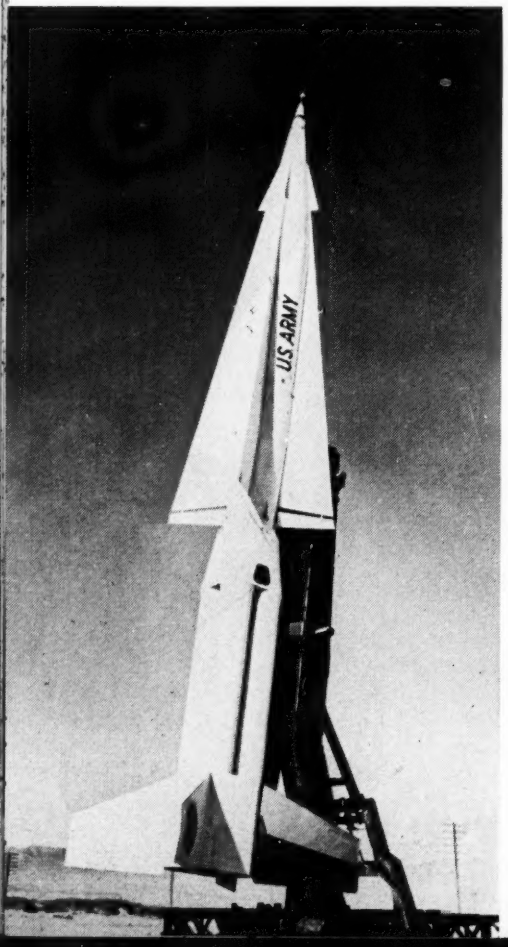
Missiles now in operational Army units include the Honest John free rocket (above) and the Corporal (right).

the development of the Jupiter by the Army is being continued in the interest of national defense.

Surface-to-Air Guided Missiles

Just as the development of Nike-Ajax anticipated the growing enemy air threat as early as 11 years ago, the Nike-Hercules is being developed to fulfill a future requirement for a surface-to-air missile of longer range and greater altitude capability. The Nike-Hercules can be armed with an atomic warhead and will replace progressively the Ajax. In addition, the Army is developing a weapon system to counter the intercontinental ballistic missile threat.

"The Nike-Hercules can be armed with an atomic warhead."



Conventional Weapons

Insofar as the Army is concerned, technology is rapidly making the term "conventional artillery weapons" obsolete; the Army is developing duality in its weapons systems. For example, missiles and rockets such as the Corporal and Honest John can be equipped with either nuclear or high explosive warheads. The so-called conventional 280mm artillery gun fires an atomic shell with the same accuracy that it delivers a high explosive round.

Within the past two years an 8-inch atomic artillery shell was introduced into the Army's atomic arsenal. By virtue of the large numbers of the accurate and mobile field pieces in the Army, this new shell improves the atomic delivery capabilities of the field army. Concurrent with this effort has been a similar one to create nuclear shells for other artillery weapons.

Other developments in the conventional weapons field included the continued testing of the 175mm gun, a versatile artillery piece combining the advantages of a howitzer and a gun.

The addition of the M56 90mm self-propelled gun provided another form of flexible firepower for the Army. Air transportable, this new weapon fills a long-standing void in airborne firepower.

To provide more flexible firepower for armored striking forces, a new series of tanks is being developed and tested. The new family —the light tank T92, the medium T95, and the heavy T96—is characterized by less weight, improved

The new M14 rifle (left) is to be phased into the combat structure, replacing the M1 rifle (right).

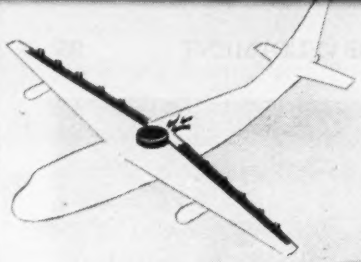
weapons systems, and increased operational range.

With respect to the individual and crew-served weapons for smaller tactical units, the Army has adopted a general purpose machine gun, the M60, designed to fire the 7.62mm NATO round. The T44 rifle, standardized as the M14, also fires the NATO round and is to be phased into the combat structure over a five-year period. Designed to destroy any known tank, a new 3.5-inch rocket, with an improved shape charge, has been introduced. New anti-tank recoilless rifles with improved performance characteristics are also under development.

Development continued on anti-tank and anti-personnel mines with a combination of fuzes to provide flexible and reliable static firepower. The capabilities of new mines are greater than existing standard types, particularly in effectiveness and non-detectability.

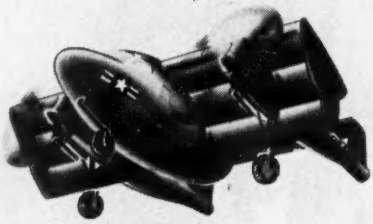
Mobility

The essential ingredients for success in battle—firepower and mobility—remain unchanged from the past. Modern armies however, with their elaborate equipment and logistical installations, are difficult to conceal. In this respect the Army faces a great challenge. Both the dispersion of units and improved cross-country mobility present the best prospects of reducing any tendency to present lucrative atomic targets on the future battleground. The ability to disperse rapidly,

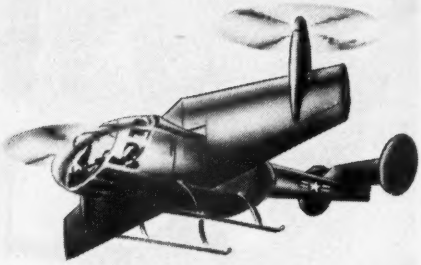


BLC (BOUNDARY LAYER CONTROL)

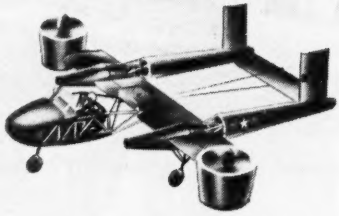
DEFLECTED JET



DEFLECTED SLIPSTREAM

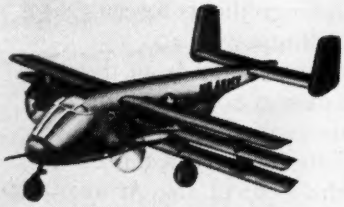


TILT WING



ROTATABLE DUCTED FAN

MULTI-WING



TILTING ROTOR

"New design concepts of aircraft for short and vertical take-offs and landings have been exploited." Shown here are some of the research aircraft types undergoing study.

coupled with the ability to converge and fight, requires a high degree of air and ground mobility.

Air Mobility

The Army has sought by various means and tests to improve its air mobility on the battlefield. New design concepts of aircraft for short and vertical takeoffs and landings have been exploited. A complete family of small, lightweight gas turbine engines to propel these future Army aircraft is planned, and some are presently undergoing tests. A new series of engines will provide increments of size and horsepower so that various combinations cover the entire spectrum of Army aircraft power systems.

Research and testing of individual lift devices were continued to improve their operational capability. In addition, contracts were let to study the various approaches for the development of a "Flying Crane" helicopter to provide such aircraft in the near future. This external load-carrying helicopter is intended to carry up to 12 tons and to perform missions varying from moving cargo or combat vehicles across terrain obstacles to clearing wreckage from congested traffic areas, thereby helping to surmount the traditional terrain barriers of the battlefield.

Ground Mobility

To meet the demands of the future battlefield the Army continued its R&D quest for increased ground mobility. In addition to the new family of tanks already cited, a fuel injection engine was introduced for the present M48A2 tank giving it greater operational range. In the armor field, development was initiated on lightweight, air-transportable armored carriers for carrying troops or supplies and also affording protection from the effects of atomic weapons. To move armored vehicles rapidly across water gaps, design work was started on a self-propelled ferry. The Army also tested a new type vehicle, the Sno Train, which travels across arctic terrain at 15 miles an hour with a 45-ton payload.

One of the developments completed was the "Mechanical Mule,"

"The Army has sought . . . to improve its air mobility." Here an M56 90mm self-propelled gun is rigged for aerial delivery.

The Mechanical Mule, an 830-pound vehicle, is capable of moving 1000-pound loads cross-country.

an 830-pound vehicle capable of moving 1000-pound loads cross-country. A new jeep will be standardized shortly. Weighing 450 pounds less than the old one, it is expected to perform more reliably and with far less maintenance than the current model. Also under development is a three-quarter ton version of the new jeep for use in airborne and other operations where light weight is essential, and new cargo vehicles of the intermediate and medium cargo class to replace current general purpose vehicles.

Other research and development projects to permit rapid movement of firepower on the battlefield included the completion of a carrier for the 81mm mortar and the initiation of development of new self-propelled artillery carriages. With these improvements the 81mm mortar can be fired from the armored personnel carrier, and new self-propelled artillery will provide more mobile fire support for the field army.

To determine how nuclear power might be applied to Army transportation equipment used in land and water operations, studies have been initiated to consider the possible use of nuclear power in locomotive equipment, several types of Army harbor and inland waterway craft, and large cargo-carrying land vehicles known as "land trains." This program has a potential for helping the Army attain a higher degree of strategic mobility.

Mobile Supplies

However, the mobility generated by air and land vehicles and waterway craft is not enough. The crux of the problem centers around the supply tonnages which the vehicles have to move in order to support Army units. As indicated previously, emphasis has been placed on

the development of lightweight, air-transportable vehicles and weapons. An example of similar progress in the logistical field is the Army's new food processing techniques such as radiation preservation of food and precooked dehydrated meals. These new methods of food processing offer solutions for the subsistence needs of mobile combat forces.

Although there are many variations possible with the dehydration and radiation processes—from the precooked, ready-to-eat individual meal to the uncooked, 25-man meal—the reductions in storage space, transportation, and refrigeration equipment will reduce the bulk and weight of supplies to be handled, thereby assisting in generating improved mobility for the Army.

Nuclear Power Plant

In an entirely different field, the first U. S. nuclear power plant designed solely for electric power production was completed in April 1957. This plant produces 1,825 kilowatts, enough for a city of 5,000 people. Since plans call for the plant's component parts to be air-transportable, it is the prototype of a model designed to meet the needs of modern warfare.

Other Developments

Other developments which are providing significant advances in logistical support operations are the bulk fuel distribution system and the rough terrain materials handling equipment programs. A petroleum distribution system is being developed around a family of collapsible storage tanks and pipelines, lightweight high volume pumps, and related terminal and tanker discharge facilities. Rough terrain materials handling equipment, now undergoing Engineer tests, will be capable of operating over rough unprepared areas common to over-the-beach operations or depot operations in unprepared areas.

Beyond this work, the Army is conducting research in the following: a low-power reactor system; a trailer-mounted plant; nuclear plants for the production of heat only; and shielding for use in mobile systems.

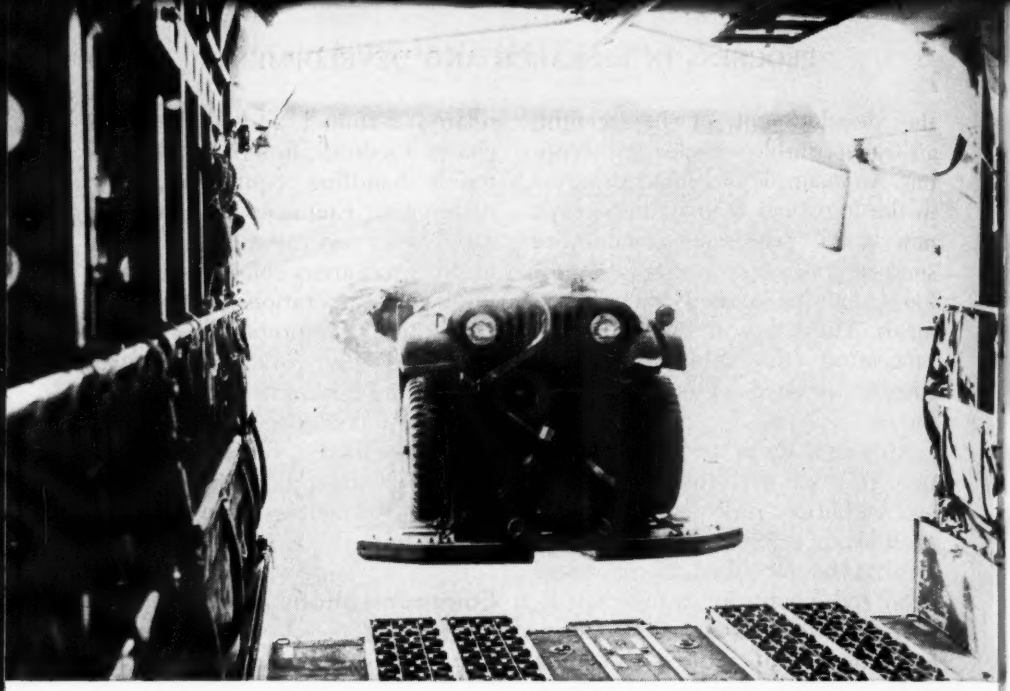
Communications and Electronics

To meet the demands of the nuclear battlefield, the Army continued to improve its target location and acquisition and surveillance means. Past difficulties in locating targets for conventional weapons have been compounded by the steady growth of longer range and the more destructive nuclear weapons.

The problem before the Army is to improve its surveillance techniques, and also continue to develop the communications equipment required to control the dispersed battle groups and the increased firepower of modern weapons systems.

Within the limits of available funds, research and development activities have been accelerated in the fields of radio, radar, infra red, acoustics, photography, and general electronics. The Army has developed surveillance techniques, particularly airborne radar and infra red, which provide a means for looking deep into enemy territory.

Procurement of side-looking airborne radar will enhance target



Seeking greater mobility on the battlefield, the Army is placing increased emphasis on development of air-transportable ground vehicles.

acquisition for modern weapons systems. A prototype of a new observation aircraft for battle area surveillance and for use in the tactical guided missile system for guidance purposes should provide improved means for future use in these areas. The basic discovery of solid-state amplifiers for microwave frequencies offers more promising developments. They have a sensitivity several times that of existing equipment allowing a greater radar range, with no increase in power required.

To control the dispersed battle groups of the recently reorganized divisions, a grid system of communications has been devised. This communications system will enable mobile forces to maintain contact simply by "plugging in" to the nearest communications center. Equipment now under development for use in the grid system includes automatic electronic switching, radio switching centers, and microwave radio relay equipment.

A new family of tactical radio equipment designed to improve unit control within the battle group is being developed, and is expected to be in the hands of troops in the near future. This family of three sets will replace as many as seven of the present types of sets, and each new set will have twice as many channels as the current seven sets combined. Possessing greater range and improved reliability, these new radios will be adaptable to the anticipated conditions of future warfare.

The whole spectrum of military electronics equipment will attain improved performance and increased reliability through the use of transistors. These lightweight devices can be operated by small dry cells far outlasting the battery

supply of vacuum tube equipment.

In addition to improving command communications, improvements were made in missile fire control. Announced publicly in the spring of 1956, the Missile Master fire direction system is an electronic system specifically designed to coordinate the fires of a large number of Nike missile units. The Missile Master system will be an integral part of Nike operational units in the near future.

Portable television units were adapted to a variety of uses during the past two years ranging from hand-carried, through jeep-mounted sets, to units packaged in drones. Tests were conducted to ascertain the degree to which television can be used to survey the battle zone and, to date, progress has been encouraging.

Miscellaneous

The Army began construction of a solar furnace, a device to be used for thermal effects testing. For tracing missiles, an optical telescopic tracker was developed. For the individual soldier, body armor, combat helmets, and an explosive foxhole digger are under development. To protect the soldier, projects were launched to provide special clothing, creams, face masks, and automatic detection devices to use against enemy chemical and biological attacks, and thermal radiation.

Enhancing the Army's over-water mobility is this inflatable rubber assault boat under development by the Corps of Engineers.

Army research and development activities encompass a wide latitude of activities. Medical research, for example, constantly seeks to discover and develop ways to reduce death rates in combat. In its cloud-physics research the Army Signal Corps studies weather facts vital to military operations. Other research is being done in problem areas such as the effects of sound and vibration on man.

To meet requirements for improved ground mobility in the Arctic, the Army has been engaged in a research program based at Thule Air Base, Greenland.

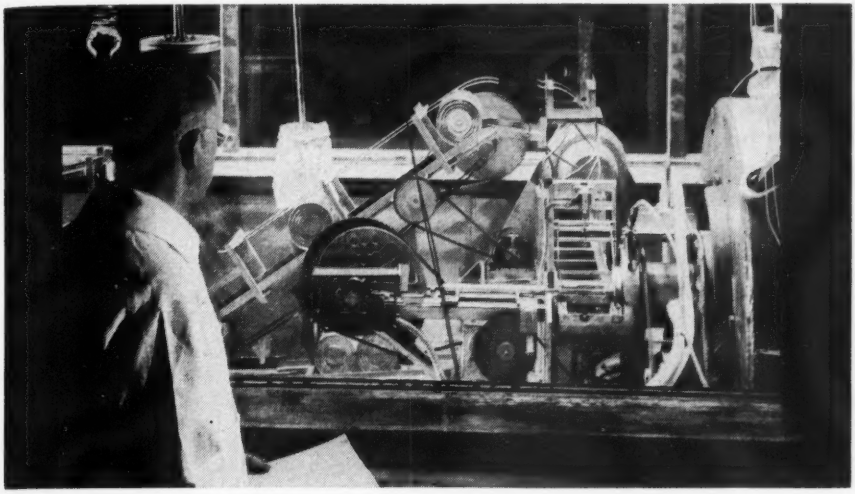
To improve mobility in the mid-latitudes, the Army Mobility Center at Vicksburg, Mississippi, has been established to develop mapping techniques for use in determining world-wide soils-bearing capacity under moving loads.

In support of the International Geophysical Year, the Department of the Army has constructed and will operate a rocket facility at Fort Churchill, Canada. This facility will be used by Army, Navy, Air Force, and civilian scientists in a coordinating program to explore the upper atmosphere.

One of the Army's most important programs is its sponsorship of a basic research program which is being carried out at 138 American universities. Thus, the Army is working to keep full its reservoir of fundamental knowledge, following which come the processes of applied research, engineering, testing, and finally the assembly line production of weapons, vehicles, and equipment.

Military research, however, is not just concerned with one end product; the hardware of war. It is concerned with improving the basic military instrument: man. It is endeavoring to relate better complex machines and future combat sys-

"A new family of tactical radio equipment designed to improve unit control within the battle group is being developed."



"New methods of food processing offer solutions for the subsistence needs of mobile combat forces." Here a laboratory test is conducted in radiation sterilization of foods.

tems to exploit the skills and abilities of the troops who will operate and maintain them.

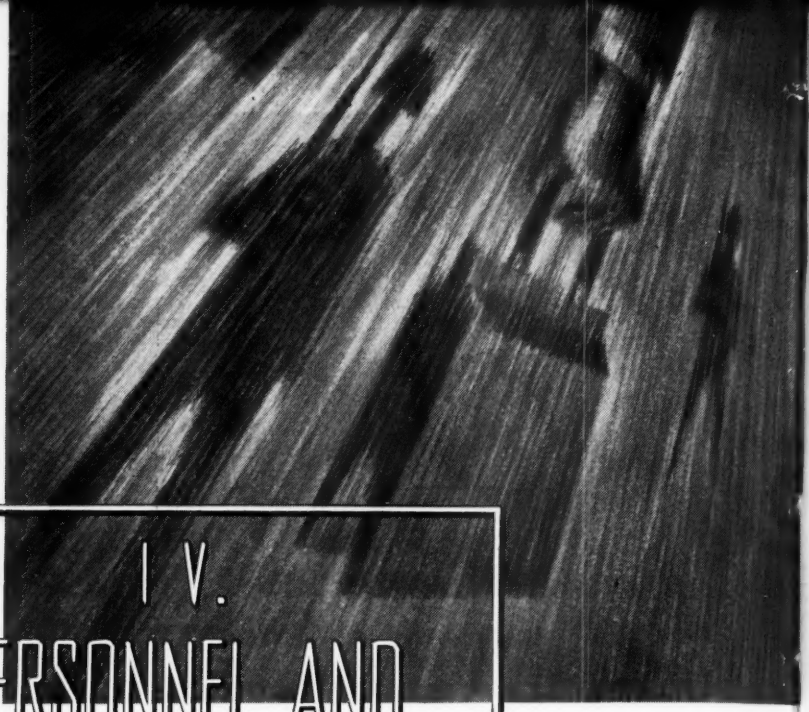
Human Research

There is no question that the soldier can be more effective by virtue of new instruments, but the soldier must in turn be better trained, educated, and related to the instrument. By human factors engineering the Army seeks to improve the probability of mission accomplishment by simplifying the maintenance and improving equipment in relation to the operator.

In the human research field, study and tests resulted in the previously discussed Trainfire, the improved concept of rifle marksmanship. Methods also were developed to increase the accuracy, extent, and reliability of information obtained from reconnaissance patrols.

Personnel qualification tests are under continuing development. New tests will help distribute equitably the manpower available to the Services; others will assist in eliminating potential basic training failures and will provide the means to place individuals where their aptitudes and skill can be best utilized. Particular efforts are being made to identify potential leaders and individuals with combat aptitudes.

In total, the Army's research and development effort represents an investment in the future military strength necessary to national security in an age where military techniques are in a state of rapid transition.



IV. PERSONNEL AND THE PURSUIT OF PROFESSIONALISM

THE CHANGING concepts of warfare, coupled with new weapons systems and increased mobility, have but magnified the need for career personnel of high professional quality. To insure the continuous and effective use of complex weapons and equipment, the Army requires a large number of skilled soldier-technicians. On the other hand, the complex patterns of future battlefields demand intelligent and resourceful combat leaders with professional knowledge and experience. Consequently, the strength of the Army cannot be measured in numbers of men alone, but also in terms of quality of its officers, noncommissioned officers, and individual soldiers.

To insure that the Army carries out its mission effectively, the flow of professional talent must be continuous so that it has the proper proportion of highly skilled career personnel graduated throughout

the grade structure. Therefore, the Army focuses its personnel efforts on the retention of leaders and technicians who have the skill, training, and experience to accept the challenging responsibilities of the modern era.

At the end of the Korean conflict, the Army and Congress recognized the need to increase the proportion of voluntary career servicemen. A stepped-up recruiting program, stress on reenlistments, a pay increase, a larger reenlistment bonus, and FHA home loans were among the steps taken to attract and retain personnel. In some respects the results were gratifying. By 30 June 1957, the proportion of Regular Army enlisted men had risen from 40.5 to about 65 per cent. The percentage of reenlistments among career regulars serving a second or subsequent enlistment rose from 51 to 89 per cent by 1 July 1955 and has consistently remained over 80 per cent since that date. In particular, the program to retain senior enlisted personnel met with success.

However, the Army's major personnel problem has continued to be the excessive turnover of its manpower. The turbulence created by turning over about 40 percent of its personnel per year not only is injurious to morale but also increases the training burden and breaks up the team play of units essential to sustain combat effectiveness. In addition, the disproportionate loss of quality first-term personnel creates shortages among the trained technicians and junior leaders.

Retention of Quality Personnel

In order to increase further the professional proportion of its strength, the Army during the past two years emphasized personnel programs designed to attract and retain people of quality who can develop into leaders and skilled technicians. The dual goals the Army seeks are the retention of greater numbers of highly qualified career soldiers and, at the same time, the elimination of those possessing unprofitable qualifications so that the highly skilled may advance as rapidly as possible and assume greater responsibility. To assist in accomplishing these ends, the Army instituted personnel programs in three general categories: those designed to increase the effectiveness of the Army as a whole; those aimed toward improving the noncommissioned officer corps; and those directed specifically toward a more effective officer corps.

Steps taken to improve morale and conditions of service Army-wide include stabilization of personnel, the Gyroscope system of unit assignment and rotation, the new Army Green uniform, and the regimental system.

Stabilization of Tours of Duty

Frequent changes of station generate hardship on military personnel and their families. This is a contributing factor to the loss of quality personnel. Consequently, to improve the stabilization of its people, most assignments are currently for periods ranging from 12 to 36 months, with some tours lasting as long as 48 months. However, the goal desired is an increased length of time between changes of station for all Army personnel as opposed to the system wherein selected groups are stabilized for a period in excess of the average, thereby

benefiting the few at the expense of the many. Greater emphasis on stability has increased the average time between movements for all military personnel, excluding short-term enlistees, from 16 to 19 months, with a consequent betterment of morale and efficiency.

Gyroscope

Personnel stability within a military unit helps to increase the unit's combat readiness because crews and teams are kept intact thereby engendering in the individual a sense of pride and permanence. Consequently, in July 1955, the Army started Operation Gyroscope, a plan applicable to conditions short of general war designed to permit personnel to remain assigned to given units. Since July 1955, about 90 units have participated in the program ranging from divisions to company-sized units of the technical services.

A primary objective in exchanging unit-for-unit is to increase the operational effectiveness of the Army. By allowing a soldier to remain with the same unit, both in the Continental United States and overseas, the Army maintains unit integrity which expands its combat effectiveness and retains a mobilization base with a high leadership capability.

Army Green Uniform

The adoption of the Army Green uniform was another step taken to increase the attractiveness of Army life. The Army Green uniform not only portrays the progressiveness of the modern Army but also possesses distinctiveness which allows a soldier to identify himself with a challenging profession.

The Army Green uniform became optional Army-wide for off-duty wear in October 1956. At the same time officers assigned to Metropolitan Washington were authorized optional on-duty wear of the new uniform. On 1 January 1957 the privilege was extended to enlisted men serving in Washington.

Wearing of the Army Green uniform will be mandatory for officers throughout the Army on 1 October 1957. On and after 1 July 1957, enlisted men entering the Army will be issued one Army Green uniform, and they may wear that uniform on duty, at their option. It is anticipated that by 1959 all soldiers will be wearing the new uniform in troop formations.

The Regimental Plan

Another program designed to attract and retain capable personnel is the Regimental Plan—a new system of designating combat arms tactical units. Instituted in February 1957, the plan solves the problem of maintaining the continuity of tradition and esprit of historically significant units, despite changes in the size and tactical organization of the Army. It provides a base for the soldier's pride in his unit, so essential to the combat effectiveness of Army forces.

Under the Regimental Plan the Army makes permanent its 164 most distinguished regiments of infantry, artillery, cavalry, and armor —those whose colors have been carried into battle by generations of American soldiers. The regiments themselves will be institutional; that is, each "parent" regiment will generate one or more active units dependent upon the

size and organization of the Army. While the changeover to the new system will be geared to the reorganization of the Army along Pentomic lines, when completed every one of the Army's combat units will be part of a famous regiment.

Terminology

While retaining or reestablishing ties with significant unit traditions, the Army's terminology also must identify properly the progressive Army forces of the modern era. Consequently, in July 1956, the Army began to review the appropriateness of its organizational names, job titles, operational terms, and names of weapons and other military equipment. The term Pentomic to depict the organizational concept of our modern Army, U. S. Army Garrison to replace the colorless "Station Complement," and the new artillery insignia to link the artillery piece with the missile of the present and future—all serve as examples which denote the modernization of the Army.

Quality Enlisted Personnel

During the past two years the Army focused much of its effort on programs to increase the quality of enlisted personnel. Higher standards of enlistment and reenlistment, improved opportunities for promotion, and incentives benefiting the career soldier were all aimed at attracting and retaining quality personnel.

Enlistment and Reenlistment Standards

The revision upward of the standards for enlistment and reenlistment increases the proportion of quality personnel by reducing the number of soldiers with a mental ability roughly equivalent to that of the lowest quarter of the Nation's manpower. Men in this latter category not only are more difficult to train but also cannot be assigned to the growing number of technical tasks and responsible jobs in a modern Army.

Effective 1 January 1956, mental standards for initial enlistment into the Regular Army were raised, thereby denying enlistments to many mentally marginal men. The standards for reenlistment also were changed to deny reenlistment to individuals of below average mentality while retaining those whose aptitudes will enable them to be assigned in more than one occupational field.

To accomplish this, reenlistment mental standards now are based on the Army Classification Battery of ten aptitude tests, a more valid measure of an individual's potential. Under the revised standards an individual must achieve a passing score in at least three of the ten aptitude areas. Thus, the Army benefits from the flexibility generated by retaining only those Regular Army career soldiers who can be trained in more than one occupational area.

Noncommissioned Officer-Specialist Program

Increasing the proportion of quality enlisted personnel will benefit the Army by providing more potential leaders and technicians. However, to retain a greater number of capable career soldiers, the Army must continue to raise the prestige of noncommissioned officers and provide opportunities

for advancement commensurate with their abilities. This it is doing.

The Army Noncommissioned Officer-Specialist Program, initiated on 1 July 1955, is designed to enhance the prestige of enlisted leaders. Prior to this date, with approximately 65 per cent of the Army authorized strength in noncommissioned officer status, enlisted leadership was inadequately recognized. To correct this situation the Army initiated the Noncommissioned Officer-Specialist Program to stress the identification and development of noncommissioned officers and to recognize the prerogatives and privileges of enlisted commanders of combat, administrative, and technical troops. Distinguishing insignia now mark the noncommissioned leader.

In December 1956, the Army completed a survey which indicated improved noncommissioned officer prestige. The survey also pointed to other areas now under study, which include improved and more meaningful specialist insignia, revisions in enlisted pay structure to increase specialist incentives, and specialist tests for promoting those best qualified.

Officers Reverting to Noncommissioned Officer Rank

Along with the stress on increasing the prestige of its noncommissioned officers, the Army has instituted several programs directed toward providing qualified enlisted personnel with improved opportunities for advancement. The previously discussed selected screening for reenlistments creates vacancies for deserving personnel. In addition, limitations placed on discharged commissioned officers reverting to the higher enlisted grades will help reduce the stagnation in noncommissioned officer promotions.

Formerly, non-regular officers relieved from active duty, in many instances, could enlist in grades E-6 or E-7 regardless of their individual qualifications and the Army's needs. A continuation of this policy would take away from promising young career enlisted men about 2,000 promotion spaces. Beginning 1 July 1957, only those officers who hold permanent warrants as Regular Army E-6's or E-7's may automatically revert to those grades.

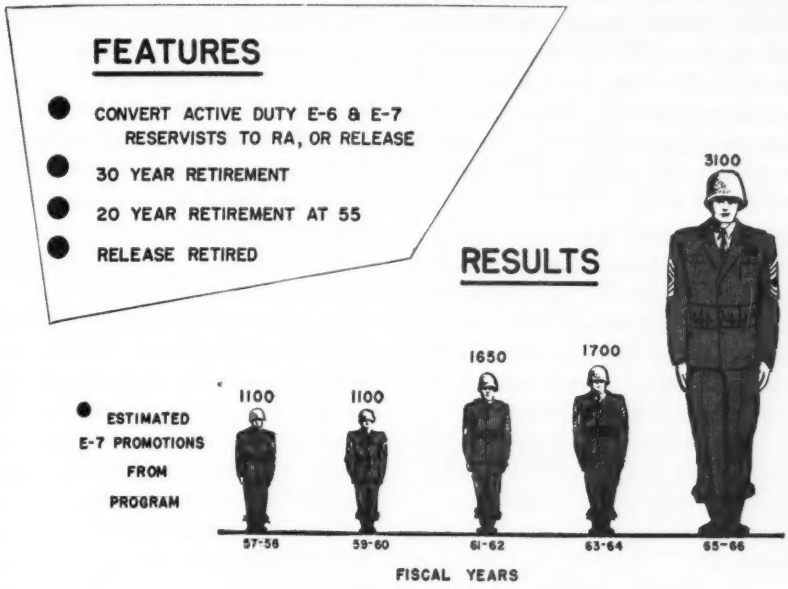
NCO Vitalization Program

A third program designed to improve promotion prospects is the NCO Vitalization Program, instituted in February 1956. The object of this program is to retire overaged noncommissioned officers thereby creating more opportunities for younger career soldiers.

Promotion Qualification Score

A new method to improve the promotion system in enlisted grades, based on the concept of the Promotion Qualification Score, will be introduced as Military Proficiency Tests are developed. Scheduled for gradual implementation in FY 1958, the program provides an equitable standard of measurement in the form of a composite score comprised of test ratings, length of service in grade, Army and civilian school level attained, qualification in arms, and other factors—all related to ability, experience, and qualifications for promotion. This new procedure will ensure a definite incentive for the enlisted man or woman—a goal to work toward;

NONCOMMISSIONED OFFICER PROGRAM



it will permit commanders to identify the best qualified soldiers to be selected for promotion—based on Army-wide standards.

Reclassification and Retraining

In December 1955, the Army began the reclassification and retraining of a sizable number of soldiers so as to balance their skills more effectively with the needs of modern weaponry and organizations. At that time the Army had an excess of 27,000 noncommissioned officers trained in the less difficult skills while critical shortages existed in combat skills requiring long periods of training. Retraining career soldiers reduces the lead time necessary to provide competent junior leaders, thereby better utilizing the Army's qualified personnel. Approximately 60 per cent of the overbalance in "soft skills" which existed in 1955 has been eliminated, and the imbalance is expected to end by October 1957.

Regular Officer Augmentation Act

During the two-year period ending 1 July 1957, the Army implemented several programs designed to strengthen the officer corps. The Regular Officer Augmentation Act of 1956 and a newly adopted policy designed to place Army Reserve officers on extended active duty combine to increase the stability and efficiency of the officer corps. Under the Augmentation Act, the authorized Regular Army commissioned strength was increased from 30,600 to 49,500. The Army has an approved 39,600 limit as a 1963 goal.

By July 1958, the Army will have appointed in the Regular corps an estimated 5,500 outstanding officers selected primarily from Reserve

officers serving on active duty. Announcement of the first increment of 1,000 officers for integration was made in June 1957. The augmentation of 5,500 officers, together with the normal annual officer procurement program, will bring the Regular officer corps to an intermediate strength of about 35,000.

In addition to the augmentation program, the Army can commission a greater number of young officers. The 39,600 approved limit raises the annual potential to about 2,000 each year in contrast with 1,350 commissions under a 30,600 ceiling. By 1963, with 40 per cent of its officers a part of the regular establishment, the Army will have a larger "hard core" of professional leaders.

Extended Active Duty

Similar to the objectives of the Augmentation Act, the program to place Reserve officers on extended active duty aims toward greater stability and increased efficiency. By 31 December 1957, most Reserve officers on active duty will either be on a long-term category or know when they will be released from active duty. Thus, the Army benefits by the increased effectiveness generated by retaining qualified Reserve officers on active duty for a minimum of 20 years.

Temporary Promotions

A further step taken to strengthen the officer corps has been a change in the temporary promotion system to provide an opportunity for outstanding officers to advance more rapidly than their contemporaries. The new system, adopted in June 1956, not only serves as a rewarding incentive to retain officers of superior quality, but benefits the Army by getting top talent into positions of greater responsibility more quickly. Heretofore, to be considered for field grade promotion an officer had to be within a prescribed zone based solely on time in grade. Now, captains can be considered for promotion the year in which they complete three years of service; majors, four; and lieutenant colonels, five.

In terms of opportunity, the officer with exceptional abilities competes for promotion primarily upon the basis of his demonstrated qualifications. At the same time, the system continues to give due credit to experience and seniority, assuring the great majority of competent and dependable officers of steady advancement opportunity.

Selection for Senior Service Schools

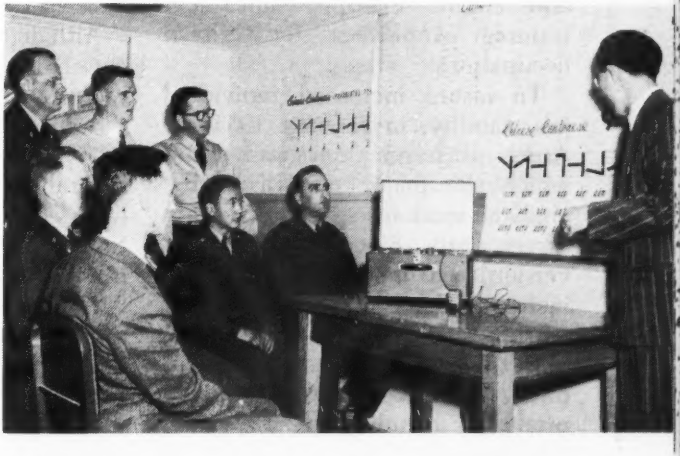
A change in the method of selecting officers to attend senior service schools on the war college level also aims at increasing the effectiveness of the officer corps. In the past a branch quota method was used so that officers competed with others of the same arm or service rather than with all officers of that grade Army-wide.

Starting with the 1957-58 classes the Department of the Army appointed a Senior Service College Selection Board, composed of graduates of senior schools, to select the officers best qualified to attend the war college-level schools. To insure representation by each branch and service, 25 per cent of the college input was reserved as a branch minimum quota. The remainder of the officers selected, however, were chosen on the basis of their quali-

fications. Increased emphasis on a higher degree of selectivity will result in the training of the best qualified officers for higher command and staff duties.

Army Language School

In recognition of the need for more linguists created by our commitments in 73 foreign countries, the Army during the past two years increased by 220 the number of students studying at the language school at any one time for an annual total of about 2,000. Also, a shift in emphasis to training in the Mid-East languages prior to the crisis in that area succeeded in anticipating the increased requirement for Arabic-speaking officers. In addition, the Army initiated refresher training courses under civilian contract to provide more officers with usable linguistic skill.



About 2,000 students are trained annually at the Army Language School.

Officer Specialization Programs

The Army also has expanded its specialization programs to include areas where there is a growing need for continuity of effort. Logistics, Aviation, Civil Affairs and Military Government, and Information have been added to the established career programs of Intelligence, Research and Development, and Atomic Energy. Also, the two related activities of Research and Development and Atomic Energy were combined into a single program in 1956.

Aside from the requirement to maintain branch qualification and attendance at service schools, officers are now permitted to remain in their chosen field of specialization. By permitting a limited number of qualified officers to specialize in areas requiring special skills and continuity of effort, the Army increases its over-all effectiveness.

Civilian Personnel

The ability of the Army to carry out its mission depends upon the combined efforts of its personnel—soldier and civilian. The Army always has recognized the need for a corps of able civilians as being essential to permit the accomplishment of its missions.

Today with more than 400,000 civilian employees, the Army is in

direct competition with the Nation's industry for the services of skilled personnel in the administrative, technical, and the research and development fields. It is essential that career opportunities and incentives enable the Army to attract and retain the best qualified civilian personnel.

During the two-year period beginning July 1955, the Army emphasized the following measures in order to improve its civilian workforce: career status for most personnel, career development, recruitment and retention of scientific and engineering personnel, and training employees for critical occupations.

To insure increased individual job stability, in January 1955 the Army instituted a program under which the major portion of the civilian work-force could obtain career status. Since then, the conversion from temporary status has increased the percentage of career personnel from 50 to 95. In addition to improved individual stability, this program resulted in a pronounced reduction in personnel turnover. The percentage of employees leaving the Service voluntarily during the last quarter of 1956 was 2.9, the lowest rate ever recorded.

Definite progress also has been made in career development. As a first step, a roster of civilian personnel office employees has been established, and a referral plan to provide qualified office personnel Army-wide has been put into effect. Thus, many civilian personnel specialists have been made available for positions where their abilities can be used to better advantage, and, at the same time, they have more opportunity for advancement. Similar career programs have been established for many critical occupations in logistics, comptrollership, and in several of the technical services.

Another part of the career development program is the overseas interchange program. Under this program career employees in the United States may be transferred to duties overseas with the privilege of retaining reemployment rights upon completion of overseas tours. Recruitment of qualified personnel needed overseas has been assisted by this program.

Although the Army's most critical civilian personnel problem—the recruitment and retention of employees for scientific and engineering positions—is far from solved, several newly designed programs have contributed toward the solution. These include increasing the number of super grades authorized —the highest GS grades of 16, 17, and 18—from 47 to 72, and the number of high grade critical scientific specialists under Public Law 313 from 13 to 35. Also, in-hiring rates were increased for engineering, professional and key managerial positions, and for other hard-to-fill occupations.

In addition, to increase their capabilities to perform skilled duties 1,218 employees have been authorized leave without pay to take formal college schooling, and 6,400 employees, with the Army paying the tuition costs, are taking off-duty training at civilian colleges or businesses. The cooperative training program—permitting employees to alternate work and college training toward degrees in science and engineering—has been extended to 30

installations, thereby assisting in the training of about 1,000 engineers and scientists.

A significant development during the two-year period was the preparation for mobilization of the civilian personnel work-force. The civilian personnel portion of the Mobilization Manpower Program has been published, and, in the event of war, the establishment of a unit of the National Defense Civil Executive Reserve of the Army Establishment permits the designation of top-flight civilian executives to head major Army activities.

Civilian personnel strength has decreased slowly during the past two years. As of 1 July 1955 the Army had 462,000 direct-hire employees. A decrease of approximately 27,000 resulted in an estimated end strength of 435,000 on 30 June 1957. The number of indigenous personnel employed through contractual agreements with foreign countries by the overseas commands will have dropped from 215,600 to an estimated 184,600.

The Army's civilian work-force is becoming increasingly stable. Progress has been made in solving the most critical problem, the lack of sufficient scientists and engineers. Efforts to increase career opportunities and to offer a self-development program to employees provide the means to improve the Army's ability to operate more effectively.

Congressional Legislation

During the past two years, in addition to the Regular Officer Augmentation Act, Congress passed important measures covering: dependent medical care, increased survivor benefits, readjustment pay for reservists, retirement in the highest grade held, improved housing, and increased career opportunities for nurses and medical specialists.

Previously, medical care was denied about 40 per cent of military dependents. Now, all dependents receive medical care either through military or civilian hospitals.

Passage of the Servicemen's and Veterans' Survivor Benefits Bill in 1956 provides remuneration for survivors directly related to the rank and responsibilities held by a serviceman. In addition, increased benefits permit survivors to maintain a more acceptable standard of living.

Two other legislative measures applied to problems of the officer corps. First, the Readjustment Pay for Reservists authorizes a lump sum payment to assist Reserve officers separated involuntarily from the Army to adjust to civilian life. Congress also made permanent the legislation permitting retirement in the highest temporary or permanent grade satisfactorily held for a minimum period of six months. Consequently, officers will not have to leave the Service in order to be assured of retirement privileges commensurate with their demonstrated achievement.

Family Housing

The provision of sufficient and adequate dependent housing is one of the most important factors which contribute to the enhancement of Army morale and career attractiveness. If the Army is to retain its competent leaders, it must provide them with family housing to allow

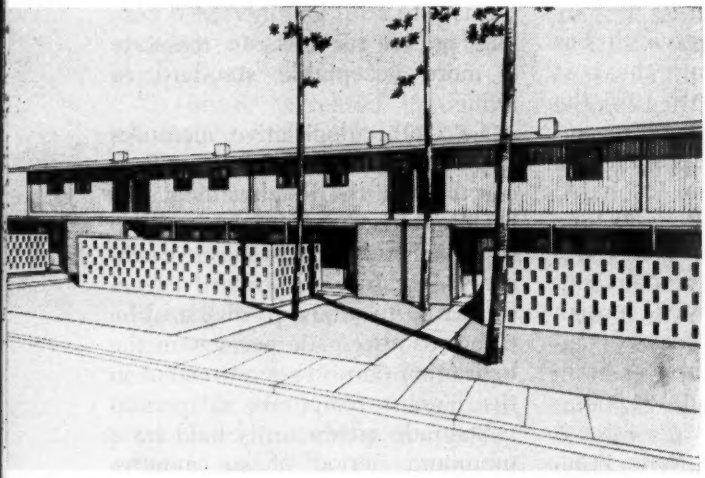
them to live normal lives, insofar as military duty permits, on a reasonable parity with civilians of a relative professional level.

During the ten-year period prior to 1955, new family housing constructed was limited to civilian contract housing (Wherry Act) and about 2,000 units authorized through Army appropriated funds. By 1955 some 83,000 Army families were living in adequate quarters, either on or off post. Thus, the Army faced a situation wherein a deficit existed of approximately 98,000 adequate housing units for its personnel. This condition resulted in forced family separations and seriously affected morale and the retention of career personnel.

During the period of this report, although the housing problem was far from solved, positive steps were directed toward providing a substantial increase in housing. Appropriated funds provided for the construction of some 5,000 Army units, and Congress enacted legislation authorizing Capehart housing for Armed Services personnel. Additional legislation raised the unit cost limit of Capehart houses from $13,500 to $16,500, thereby insuring more adequate housing. The Capehart legislation is of particular significance since by this means the bulk of family housing requirements in the continental United States and its possessions probably will be filled.

Measures were also adopted to insure that local commanders maintain close contact with civilian officials regarding military housing. By this means, civilian officials are made aware of the requirements for family housing of Army personnel and of future plans for on-post construction of units. Such a program helps encourage community support in building off-post rental housing on the firm basis of Army needs.

With respect to overseas family housing, the major development during the period was the use of funds generated by the sale of surplus agricultural products to provide housing in areas where an acute shortage exists. Under the



"Positive steps were directed toward providing a substantial increase in housing." Shown here are prefabricated, row-type quarters.

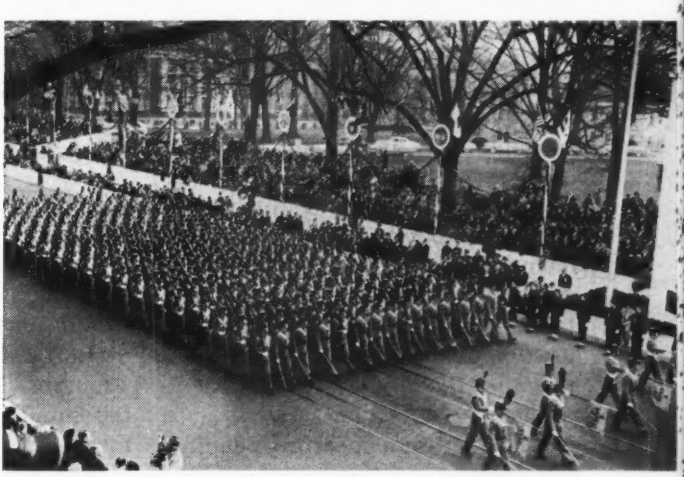
Surplus Community Housing Program, 378 of a programmed 505 houses have been completed in Japan, 1,030 units are presently under construction in France, and construction will begin in the near future on about 415 units in Italy.

A further problem with regard to housing is that for years Service personnel assigned to areas where only substandard public housing was available had no choice but to forfeit their quarters allowances upon occupying such quarters. The resignation of many young officers can be attributed to such housing conditions. With favorable Congressional action on pending substandard quarters legislation, the serviceman in the future, if forced to live in inadequate quarters, will pay the rent equivalent to the rental value of the property.

Thus, both at home and abroad, the Army is attempting to remedy its acute housing problem. Although it will be some time before the aggravated shortage will be eliminated, heartening progress has been made during the past two years toward the Army aim of providing adequate housing for all of its eligible personnel.

Military Pay

In 1957, a new concept for modernizing military pay was introduced in Congress. This concept, based upon reward for merit, was advanced as a means to attract and retain quality leaders and skilled technicians. Based on the Cordiner Committee studies, the proposed legislation advocated the following principles: substituting, for the current longevity system, a system of pay based upon merit coupled with increased in-grade pay increments; eliminating the present system whereby a man of lower rank can receive more pay than one of higher rank; establishing wider pay differentials between grades with substantial increases in the senior officer and enlisted grades, thereby stimulating long-range career motivation; expanding the officer and enlisted rank structures by two grades each; and establishing proficiency pay advances of one and two pay grades for selected enlisted personnel who demonstrate profi-



"During the past two years efforts were made to maintain the Corps of Cadets at full strength."

ciency in occupational areas of critical importance to their Services.

The complicated weaponry and challenging leadership requirements of modern military forces make it imperative that the armed services attract and retain a larger portion of the Nation's most promising young people. The Army has always taken the position that the motivation inherent in Service life surpasses monetary remuneration. At the same time the primary objective of any worthy personnel program must be to compensate adequately an individual for merit and acceptance of responsibility. Consequently the Army was instrumental in developing and recommending to the Cordiner Committee concepts and principles requisite for a modernized pay structure. Such a pay structure, coupled with improved personnel management techniques, is a long-range Army personnel objective. Its implementation should insure a substantially greater number of quality personnel and thereby a more efficient military organization.

As an interim measure pending Congressional action on a merit pay bill, the Army supported a Department of Defense concept to provide proficiency pay under existing authority to selected enlisted men in grades E-3 through E-6 who demonstrate proficiency in military occupational specialties of critical importance. Under this plan, each Service, over a three-year period, is authorized to pay proficiency pay to 15 per cent of its enlisted strength in the form of one or two pay grade advances. This proficiency pay program, within appropriation limits, will be implemented during FY 58.

Moreover, the Army supported proposed legislation, based on a Cordiner Committee recommendation, to authorize "term retention pay" for Reserve officers who continue on active duty beyond their obligated service. Such legislation would enhance the security of the Reservist when confronted with the threat of involuntary separation prior to establishment of retirement eligibility. This advantage to the individual officer is supplemented by an important benefit to the Army: the opportunity to increase the quality of the younger officers selected for service beyond obligated tours.

Results of Personnel Programs

For the past two years, the Army has emphasized programs which would increase the professional proportion and the quality of its strength. The long-range effects of the numerous changes cannot be measured for some time to come. However, an analysis of the results thus far reveals that the programs have succeeded to an appreciable extent. For example, personnel turnover continues to be a critical problem, but the turnover has been reduced from the 800,000 annual loss out of 1,400,000 in FY 1955 to a 460,000 loss out of 1,109,000 in FY 1956 and a 419,700 loss out of 1,026,000 in FY 1957. This was done even though enlistment, reenlistment, and promotion requirements were more stringent.

V.
ARMY LOGISTICS AND MODERN MANAGEMENT

IN THE event of general atomic war, the entire logistical system –from production facilities through the lines of communication to the front-line supply distribution points –may be subject to nuclear attack. Consequently, that system must gain the protection which decentralization, dispersion, protective construction, and mobility can provide.

In addition to the necessity of realigning the logistical system in order to survive nuclear attack, the reorganization of the Army's tactical units dictates a streamlined supply system commensurate with the mobile pace of combat forces. Otherwise, the fighting elements will extend themselves beyond available support.

The advent of modern weapons systems, which created the necessity for a more flexible logistical

system, also has generated difficult supply requirements which operate as a force against mobility. The variety and complexity of new weapons introduce not only thousands of parts into the supply system but also the problems of maintenance of complex electronic equipment and the handling and storage of new fuels.

The Army must insure that its forces are fully prepared and equipped to fight a war, with or without nuclear weapons, anywhere in the world. To retain a constant state of readiness, and concurrently to modernize Army forces as quickly as possible within budgetary means, new material must be phased into the Army's supply system, and the old must be phased out over a period of years. Consequently, two or more types of weapons or equipment for the same general purpose may be in stock simultaneously, thereby adding further to the logistical burden.

The development of a modernized, streamlined supply system presents a problem with a multitude of facets. Over the past two years, however, a continuing effort has been made to make the system less vulnerable, more efficient, and less complicated. Progress has been made in reducing the number of items and the weight of supplies. Under test are procedures which indicate a possible reduction of up to 60 per cent of supplies currently stocked in forward areas. Such a reduction in forward stockage requires a greatly improved order and shipping time through the application of electronic devices which permit centralized and accurate control of inventories. The development of "roll-on-roll-off" cargo ships, transport cargo on wheeled vehicles, and the aerial tramway point toward the solution of another requirement for any future war—the discharge of cargo with minimum vulnerability. But these are just examples of progress being made. All in all, improvements in the entire logistical system are underway.

Streamlining the Supply System

Under the anticipated conditions of modern warfare there is not room for a single item of supply which does not contribute directly to winning a war. Thus, the keynote of efforts to improve the logistical system is "austerity." Measures directed toward culling out nonessential items from the system include the following: stocking only frequently needed items with using organizations; holding those supplies less frequently required in rear areas; reducing depot stocks to levels necessary to carry out the Army's mission; and reducing the number of special-purpose items.

Reduction in Numbers of Supply Items

A marked reduction in the number of line items in the Army's supply system, partly by standardization and partly by elimination of obsolete or nonessential items, was the basic step taken to streamline the over-all system. In 1952, when the program began, there were over a million and a half line items in the system. By 30 June 1956 the total number had been reduced to about 900,000. The selection for elimination of 225,000 line items in the past two years was partially offset by the introduction of 155,000

new ones. However, an over-all reduction was accomplished in spite of an increased number of missile and aircraft items and the slow obsoletion rate of conventional equipment. Further reductions in the numbers of line items must be accomplished to attain the desired total of between 700,000 and 800,000.

During the past two years, the Army's Cataloging and Standardization Programs contributed to the net reduction of about 93,000 supply items. Under the Federal Cataloging Program the Army, in September 1956, completed the identification phase of supply items in terms of Federal Catalog data. Conversion of supply operations to the exclusive use of Federal Catalog data should be completed early in FY 1958.

The Standardization Program was designed to reduce the number of sizes and types of items in the supply system. Present efforts are being directed toward a systematic screening of items identified within classes (Federal Supply Classifications) to eliminate those nonessential and to replace several items wherever possible by the minimum number capable of performing the required functions.

The reduction of the number of repair parts for maintenance contributed substantively to the campaign against an excessive number of line items. Presently, the problem is being attacked at its source –before new equipment enters the system, maintenance engineers participate in the development of equipment to insure that repair parts are held to a minimum. As an example, the Nike guided missile system contains about a million and a half parts; yet, by replacing units containing thousands of parts, only 11,500 line items for Nike have entered the supply system.

In addition to preventing an excessive build up of repair parts for new weapons and equipment, the Army continually screens and evaluates the parts presently in its supply system. Systematic screening of about 559,000 parts during the past two years resulted in the selection for elimination of 225,000. To prevent the recurrence of a vast number of low-mortality, nonessential repair parts from entering the supply system, each new item of equipment is analyzed to insure minimum procurement of only the often used repair parts.

Stress during FY 1957 also was placed on the elimination of obsolescent World War II tactical, wheeled vehicles—cargo, dump, and tank trucks—which are uneconomical to repair and maintain. This one step indexes the effectiveness of concentrated effort in specific areas, for it will permit the removal of about 25,000 items from the supply system in the near future.

The problem of repair parts has been aggravated by the great variety of commercial-type engineer, office, and materials handling equipment. To combat this situation, the Army instituted a system for standardizing commercial-type items within a geographical area.

By redistributing engineer equipment, such as cranes and tractors, 276 different types of equipment have been withdrawn from overseas theaters. In addition, the Quartermaster Corps now has overseas only two types of its materials handling equipment.

During the past two years the

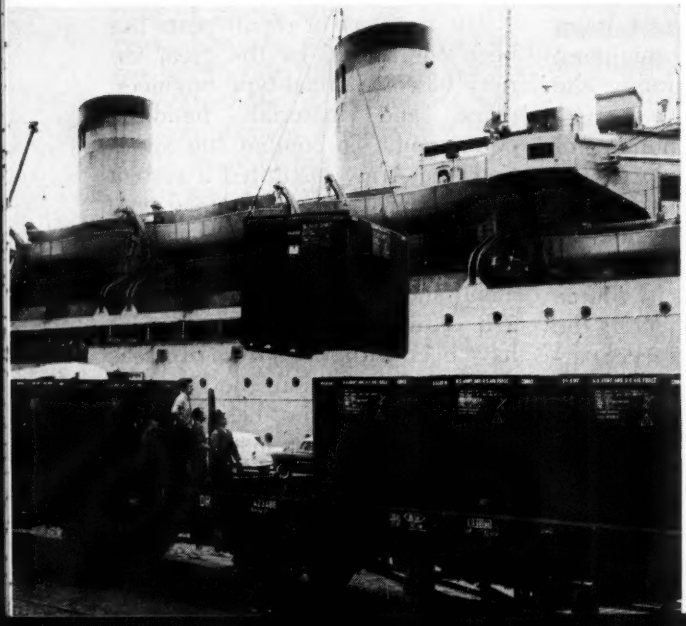
Army also designed procedures to cope with the impact of new weapons and equipment on its logistical system. The installation of the Modernization Coding System, which relates current items with those in the developmental stage, provides a basis for a time-phased plan for changeover from the old to the new. Consequently, the Army can identify the current and projected status of supply items for a planning period of from three to five years. The Army's inventory now is 85 per cent modern, but about 42 per cent of this inventory may become obsolescent within the next five years. Provided with this planning guidance, the logistical planner can take positive action to eliminate line items from the supply system.

Revised tables of authorizations for Army units further assisted in reducing the excessive number of supply items. Based upon a completed study of the types and quantities of supply items authorized for Army units, tentative Tables of Organization and Equipment were field tested and are now being incorporated in revised tables of authorizations which will eliminate duplicate and excess line items.

Echelonment of Supply in the Logistical System

Discarding nonessential categories of supply and reducing the over-all number of line items provide a sound basis for streamlining the logistical system. However, the echelonment of supplies within the system is of equal importance. To gain the flexibility and mobility necessary for a modern supply system, only those essential items which are needed frequently will be stocked with the using organization. Thus, units will not be burdened with seldom-used supplies.

During the past two years, the Army tested and installed the Army Field Stock Control System so as to remove slow-moving items from stockage at lower echelons. Tests indicated that the withdrawal of supplies for which there is a de-



Conex containers, en route to West Germany, are typical of new supply methods evolved by the Army.

The aerial tramway is one of several developments pointing to solution of cargo discharge with minimum vulnerability.

mand less than three times in six months permits a reduction of half the items stocked at station level. This stock control system has been installed at Class I installations in the United States and will be completed Army-wide by December 1957. Current demand for an item, not past issue experience, must be the basis for stockage within a using unit.

To speed up service to using units, self-service supply centers were tested at Fort Lee, Virginia, and Fort Lewis, Washington. Results of the supermarket approach for the issuance of expendable supplies of all technical services proved successful, and 47 self-service centers are in operation in the United States.

Modern Army Supply System

To make our overseas installations more efficient and less vulnerable in time of war, the Army is testing a new logistical concept between its base in the United States and the Seventh Army in Germany. Project MASS, which stands for "Modern Army Supply System," couples the principle of selective stockage in forward areas with high-speed communications for transmitting requisitions to the rear and rapid priority transportation for delivery of supplies to the user. The goal sought is maximum service with minimum forward stock levels.

In Germany, Seventh Army requisitions, punched on electric accounting machine cards, are screened against overseas stockage lists by these machines. Requisitions then are electronically transmitted to the United States to procure items not stocked overseas or for replenishment of items stocked. Electronic transmission of requirements, high-speed data process, and transportation methods geared to the urgency of the requirement reduces overseas supply transit times from the previous 120 days to less than 60 days.

Before this test system went into operation, large fixed depots in Europe were authorized to stock over 400,000 line items of repair parts

for Seventh Army. Today, small depots, which can be made mobile, are doing the same job successfully with a stockage of 40,000 parts. Thus, the Army is developing principles which can be directed toward gaining the increased mobility required.

To a large measure, advances in electronics have made possible a more streamlined supply system with a greatly reduced proportion of supply items in forward areas. Further application of electronic data machines is both desirable and essential to permit better control over widely dispersed stocks.

During the past two years electronic processing equipment has been installed at six major technical service installations in the United States. Additional electronic devices will be phased into the logistical system in the future, thereby facilitating inventory control. Upon completion of the installation of electronic data processing throughout the logistical system the Army not only will be able to determine rapidly and accurately the stocks on hand at any time but also will be able to accommodate the anticipated mobilization workload without significant increases in personnel and equipment.

The recently formed Transportation Terminal Commands for the Atlantic, Pacific, and Gulf areas also add an essential element to a logistical system designed to survive a surprise nuclear attack. If major ports are destroyed, the commands can redirect cargo to minor ports with a minimum loss of efficiency. Thus, the Army is gradually acquiring the logistical means and structure needed for future war.

"Results of the supermarket approach for the issuance of expendable supplies of all technical services proved successful. . . ."

Reduction in Quantity of Supplies

The elimination of excess supply items, the echelonment of supplies, and the use of electronic devices must be supplemented by a collateral effort to reduce the tremendous quantity of Army supply. Otherwise, tonnages will strangle the Army's efforts to modernize its supply system.

To lighten the supply load, the Army is endeavoring to reduce both the quantity of supply it handles and the quantity it holds in stock. During the past two years progress has been made in the following areas: using up serviceable excess supplies without replacement; disposal of about $3.1 billion of excess, foreign excess, and surplus property; direct shipping from vendor to user where feasible; and installing better methods of inventory control.

As of 30 June 1957 the value of Army-held depot and post inventories totaled more than $21 billion. In addition, about $5 billion worth of major equipment was in the hands of the troops. This represents a reduction of $.5 billion since 1 July 1955.

Over the past two years, the Army had to adjust its manpower strength downward. Supply levels and pipelines required to support the former higher strengths naturally were somewhat greater than the needs of the smaller force. In the process of reducing stockage levels, the Army has used up a large part of former excesses of usable supplies and material.

The Army also disposed of excess, foreign excess, and surplus property which originally cost about $3.1 billion. About 40 per cent of total disposals were classified as scrap. Local excesses, redistributed within the Army itself, totaled $2.4 billion which is not included in the $3.1 billion disposal figure.

The Army increased its efforts to prevent items from entering the depot system unnecessarily. By increasing the use of direct deliveries from vendor to user, about 25 per cent of all issues during the past two years by-passed the depots. Local procurement at post level also prevented common-type, commercial supplies from entering the system. The stress on user buying has reduced the workload at depot level.

Inventory management has improved steadily by the implementation of uniform supply control procedures and through the use of financial inventory accounting, stock and industrial funding, and improved market analysis techniques—as exemplified by the Army Field Stock Control System. The effectiveness of these measures is reflected in the continuing downward trend in excessive inventories where these systems have been installed. During the last two years, the number of depots in the United States decreased from 73 to 48, attesting to the growing effectiveness of the Army's inventory control system and other measures adopted to reduce the quantity of supplies.

Facilities

The Army has begun to relieve itself of the burden of operating commercial-type facilities to the extent practicable. The completed review of 633 facilities—ranging from shoe repair shops to bakeries—led to the closing of 95. Using civilian-operated concerns to ac-

complish tasks not related directly to the Army's mission permits greater concentration of effort in support of tactical forces.

The demand for readiness in the event of atomic war has necessitated a shift of emphasis with regard to the Army's industrial mobilization facilities. Greater reliance is being placed on maintaining ready reserve stocks rather than on the capability of reactivating standby production in time to meet combat needs. The activities of all Army industrial facilities, therefore, are being re-examined to insure that they are essential and will provide for optimum support relative to reserve stocks.

As the Army depends upon private industry for quantity production, greater emphasis has been directed toward making the Army's arsenals the reservoir of production knowledge and skills for military-type items. These skills are rapidly lost in the Nation's industrial plants as procurement funds are reduced. The primary purpose of the arsenals, then, is to assist research and development by building experimental models of new or modified military items and to maintain production "know-how" by keeping current drawings, specifications, and other manufacturing data which can be made available to industry when needed for conversion from peacetime to war production.

Through industrial mobilization funds, production base projects are undertaken to improve our materiel readiness position for any type of war. To accelerate initiation of these projects, decentralization of project approval authority, within specified monetary limitations and based upon program approval, has been accomplished.

The Materiel Program

In this period of rapid transition in the art of warfare, the procurement of hardware reflects the changing complexion of an Army which is modernizing as rapidly as feasible. The Army recognizes that it must provide its forces with the best in modern equipment. At the same time, however, the rate of modernization and the direction of modernization have serious consequences upon budgetary decisions.

Since the most likely threat facing the Free World is the small war, the Army, during the past two years, directed its procurement efforts primarily toward providing the equipment and weapons necessary to meet this threat.

To insure that the Army will maintain a continuing high degree of readiness, the following objectives govern the procurement program: maximum emphasis on the introduction of new items; maintenance of a balanced atomic and conventional capability; and modernization of existing inventories.

Placing maximum emphasis on the introduction of modern weapons and equipment permits a more rapid transition of the Army's inventory. In addition, the early introduction of new items allows the discontinuance of procurement of the conventional weapons not required in the future Army. Thus, the increased emphasis on new equipment not only strengthens Army forces but also reduces the burden on the supply system. As an indication of the stress being placed on the procurement of new items, in contrast with the 32.4 per

cent of procurement and production funds programmed for new weapons and equipment in the year ending 30 June 1955, during the past two years the figure rose to 68 per cent.

While modern weapons and equipment enhance the Army's capabilities with respect to tactics and strategy, it will be some years before the Army is fully modernized. During this time the Army must phase in the new weapons and phase out the old in such a way as to retain the capability of fighting a war with the weapons within its force structure.

In addition, the Army is modernizing its existing inventories of items which are affected more by use and age than by technological advances. These are the nonglamorous items, such as trucks, construction equipment, and materials handling equipment which assist in the supply of Army forces. The life of such items is comparatively short, so they must be replaced regularly to maintain effective logistical support.

Military Construction

During the period of this report the Army's Construction Program was subjected to funding limitations, and all construction projects were reviewed under guidelines established by the Department of Defense. At the start of the period, the Army had $373 million in authorized projects and $264 million in available funds. Congress, over the two-year period, approved $857 million in new work and $687 million in funds. The Construction Program, however, was leveled off by the Department of Defense at approximately $400 million annually and approximately $200 million of authorized projects were placed in a deferred category. Final design was completed on deferred projects in order to have the work ready for contract award.

Construction activity was focused primarily on providing urgent mission-type facilities and a phased increment in the permanent plant required for the long-range Army. Emphasis was placed on the following categories of construction: Nike launching sites; troop housing (barracks and BOQs); and family housing.

Significant progress was made in providing Nike facilities to keep pace with the Army's Nike training and procurement programs. About 30 per cent of available construction funds in the past two years were used for Nike construction, and 124 additional Nike battery sites were started and 128 completed.

Overseas, approximately $88 million was used to start new work on a line of communications in France to support Army forces in Germany.

Housing Construction

A large proportion of the remaining construction funds was directed toward solving troop and family housing problems. If the Army is to retain the high quality personnel necessary in a modern age, it must provide quarters commensurate with the increased performance it demands from its soldiers. Housing for both married and single personnel is critical, with family housing being the more acute.

On 1 July 1955, the Army had 222,000 permanent barracks spaces completed or under construction. Construction has been started on

39,000 new spaces, bringing this total to 261,000. Modernization of an additional 66,150 barracks spaces also was completed and projects were started for an additional 45,725.

Since 1 July 1955, the Army started construction on 4,942 family housing units, completing 500 of these units along with 3,030 which had been started prior to that date. Under the Capehart housing program, passed by Congress in 1956, more than 10,000 family units are now under contract. In 1957, Congress authorized the previously mentioned privately financed Capehart housing with the unit cost limit raised from $13,500 to $16,500. The new ceiling permits far more adequate housing thereby enhancing the Army's long-range housing program.

To alleviate the housing shortage in areas where Nike personnel are on site, the Army was authorized to lease 3,000 family housing units. In addition, as a partial remedy to the overseas housing shortage, building programs were initiated in France, Italy, Turkey, and Japan with the sale of agricultural commodities defraying the costs.

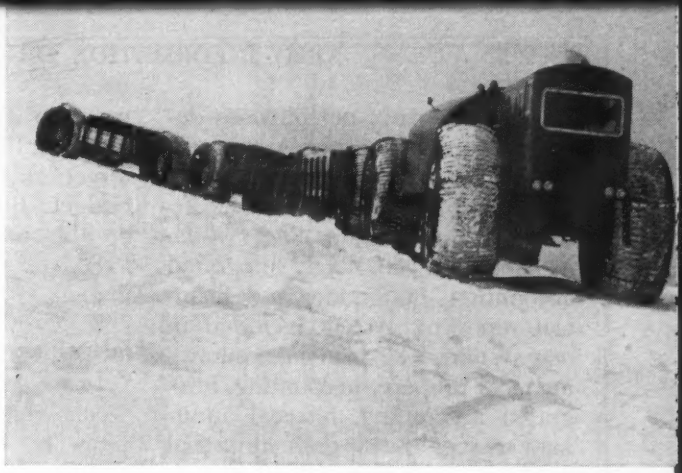
Construction for the Army's reserve forces, under Military Construction, Army Reserve Forces Funds, also was stepped up to meet the increased requirements of the new reserve program. Space criteria and standard armory plans have been revised to provide for new training and equipment storage and maintenance requirements. Standard plans were prepared for 100- and 200-man Army Reserve Training Centers, thus providing adequate facilities in the smaller cities and towns in which participation in reserve training is best. Construction contracts for 181 Army Reserve Training Centers were awarded during FY 1956 and FY 1957 representing a 500 per cent increase over the previous two-year period. Construction contracts for 491 National Guard armories and non-armory projects awarded during the same period reflect approximately a 40 per cent increase over the previous two-year period.

Supply Management Training

A Logistics Officer Program was implemented in February 1956 to insure a sufficient number of qualified and trained logistical managers. Thus far, about 700 officers have entered the program. The careers of these officers are carefully monitored in order that they progressively pass through the Army school system as well as perform duties of increasing responsibility.

Maximum benefit cannot be gained from the innovations instituted to modernize the Army's supply system unless logistical training is geared to the efficient operation of the system. To provide the necessary logistical training that cannot be obtained elsewhere in the Army, the 12-week Supply Management Course began in October 1954 at Fort Lee, Virginia. In May 1956 this course was expanded, and the U. S. Army Logistics Management Center was established to provide an improved curriculum including the courses in the following areas: supply management; procurement management; requirements management; storage and distribution; maintenance management; and property disposal management. In addition the Army Logistics Management Center is developing ex-

"The Army tested a new type vehicle, the Sno Train which travels across arctic terrain at 15 miles an hour with a 45-ton payload."



tension courses in logistics for reserve officers not on active duty.

It also is assisting in the development of Supply Management Training for indigenous personnel. In 1957 courses began in Korea and Taiwan, and by September 1957 training will be underway in Japan and the Philippines. Thus, a start has been made providing much-needed logistical training for the countries receiving assistance under the Military Aid Program.

During the past two years approximately 1,300 Army personnel completed courses at the Logistics Center. Since the majority of the courses began during the past fiscal year, an increasing number of officers and key civilians—1,640 in FY 1958—will be trained to provide the management necessary for the logistical support of the modern Army.

Command Management

In order to maintain a combat-ready Army, the business side of the modern Army necessarily remains big and complex. Today its capital assets in real estate, supplies, equipment, and various holdings are valued at over $52 billion. The actual hardware of supplies and equipment equals $26 billion.

Aware of the requirement for a smooth-running managerial process, in late 1954 the Army organized a task force to improve management by designing a depot command management system. At the same time, another task force was organized to solve the problems of Class I installations. Since 1 July 1955, a single management system has been developed—the Army Command Management System which includes the following management techniques.

First, the integrated single system was based on the Program System which encompasses all of the Army's nontactical activities. This system establishes an orderly development of various programs such as personnel, material, and installations from the planning stage through execution to the review and analysis stage. The Army programs activities against objectives in accordance with a time schedule. Programs are issued by the Department of the Army to furnish operational guidance for the conduct of the Army's business during the fiscal year. From this guidance, field commanders and installations chart their own courses of action through

programs to carry out missions derived from the master Army program.

Next are the elements of the Financial Management Plan which provide for a completely integrated accounting, budgeting, and financial reporting system included in one system. The plan incorporates financial property accounting, integrated accounting, internal auditing, use of stock and industrial funding, and cost-of-performance budgeting. All elements of this plan were implemented in varying degrees, and headway was made toward the integration of certain of these elements with the Program System to form the over-all management system. This system, systematically introduced, is being installed Army-wide.

Third, we have the Army's Budget System by which financial requirements are estimated and presented. Plans are now well underway to merge the budget and program systems so that all elements in the Army program bear a direct relation to items in the budget. By FY 1959 the Army will be able to use a cost of performance type budget in all major commands.

Summary

In summary, the Army has made a concerted effort over the last two years to modernize its logistical system and the management thereof. Over and above the efforts described is this more important factor: the Army has sustained its combat forces in a state of operational readiness at multiple geographical points of the globe. Unlike the military forces of the nations of the Communist bloc, the United States Army maintains its strength along distant exterior lines. For this reason its logistical base is large, but continuing effort is being applied to make it increasingly efficient.

VI. INFORMATION AND RELATED ACTIVITIES

THE increasing complexity of the Army magnifies the need to interpret properly the importance of the Army's role in national defense. Moreover, in an era when technology is continually opening new vistas of possibilities in terms of weapons, equipment, and techniques, the Army's Information Program must achieve a continuity of effort if it is to succeed.

Telling the Army's story to the public—soldier and civilian—permits that public to understand the mission of the Army and to evaluate the manner in which it executes its mission. In order to reach a larger proportion of civilians, it is necessary to maintain continuous communication with particular groups: the active Army, the reserve components, Army alumni, and civilian leaders in and out of the government.

During the past two years the Army reshaped its information activities to increase Department of

the Army assistance to commanders. In November 1956, a new Information Program, in chart form, was distributed to enable Army representatives, world-wide, to speak with consistency and certainty in explaining Army plans, policies, and performance. Data sheets to fill out the blueprint of 93 categories of Army activities are being forwarded to the field as they are completed. Providing basic guidance for commanders and information officers assists them in designing programs which will gain troop and public support of the Army's role in national defense.

As an adjunct to the new Information Program, all active Army, National Guard, and Army Reserve officers received a Pocket Guide, *Know Your Army*, in May 1957. This pamphlet, although not all-inclusive, contains an explanation of twenty-two areas of vital interest to the Army. Consequently, it furthers the officers' understanding of the Army's contributions to defense and the beliefs upon which they are based so that in informal discussions or on speaking engagements they can enhance public confidence in the Army's ability to perform its mission.

Community Relations

To reach a larger segment of the public, emphasis also was directed toward accelerating the Community Relations Program, designed to bring about a closer relationship between civilian and military communities. Providing multiple means for U. S. and allied civilians to learn about the Army—open house on posts, visits to Nike sites, and participation in public events—civilian contacts with the Army have increased fivefold since 1 July 1955. Also established was closer liaison between the Army and civil professional and fraternal organizations as well as industrial firms in communities near Army posts. As an indication of the Army's successful community relations efforts, the Southern European Task Force, the Seventh United States Army, and the United States Army Infantry Center were cited by the American Public Relations Association for outstanding public relations achievement in 1956. To assist further the commander in developing and implementing a sound Community Relations Program, the first regulation, based upon proven procedures, was published in January 1957 to provide guidance for commanders.

Troop Information

From the time a soldier joins a unit, an alert commander, assisted by his information officer, should seize every opportunity to convince the soldier that he is an essential part of one of the best units in the Army. A successful Troop Information Program, based upon this approach, is an important segment of the over-all leadership required to weld soldiers into effective units.

Recognizing the need to identify unmistakably the commander with troop information, in 1956 the Army separated information and education activities. Troop education, a program designed to increase the quality of individuals, was placed under the Deputy Chief of Staff for Personnel as a function in line with the increased emphasis on quality personnel. Troop information and public information were realigned, Army-wide, as co-equal functions

under an information officer reporting directly to the commander.

To permit commanders to relate their troop information programs to their units, the number of mandatory subjects covering Army-wide matters of interest was reduced from three to one each month. Information materials provided for regimental and smaller units were reoriented toward unit requirements. Thus, commanders now have more flexibility and more appropriate subject material which enables them to focus their programs on the needs of their individual commands.

Other improvements in troop information include the establishment of an Army News Service to disseminate quickly to Army newspapers information covering a wide range of activities. News, editorials, and feature articles discuss timely policy decisions and accomplishments such as promotion policies, MOS imbalance, qualifications for service schools, new weapons and equipment, and division reorganization—all having a direct impact on the soldier.

The Army also installed television in overseas areas—Panama, Alaska, Fort Churchill (Canada), and Eritrea—where commercial facilities were inadequate to fill information requirements.

Public Information

A concerted effort has been made by the Army to increase its public information capability in order to reach a greater proportion of the civilian populace. The U. S. Army Home Town News Center increased by about 40 per cent its production of stories concerning Army personnel which are released to news and radio media. To facilitate coverage in news media, the Army also established a branch office of CINFO in New York City. Represented by radio, television, and magazine and book sections, the Army has at a news focal point personnel who can assist in getting its story across to the public by maintaining liaison with civilian news media, anticipating their needs, fulfilling requirements, and explaining the Army's role.

Related Information Activities

The Army also instituted new procedures to insure that its own alumni of retired personnel retain a close association with the active Army. The establishment of a Retired Activities Unit in the Office of The Adjutant General provides a point of direct contact for retired personnel which keeps them informed of Army activities as well as their personal rights and benefits. In March 1956, the Army began to distribute monthly the *Retired Army Personnel Bulletin*, to provide a continual source of information concerning Army views. Thus, keeping the alumni of the Army informed of Army progress and views makes available a large group of qualified personnel who are interested in interpreting the Army to the members of their civilian communities.

Reorganization of the Association of the U.S. Army

A far-reaching step taken during the past two years was the reorganization of the Association of the United States Army—an organization dedicated to the advancement of national security and the further-

ance of public understanding of the Army. Prior to the Association's reorganization in 1956, the voice of the Army was weakened by a "shot gun" approach scattered among the somewhat narrower interests of branch, service, and component. The reorganization blends together for consolidated effort all who support the Army.

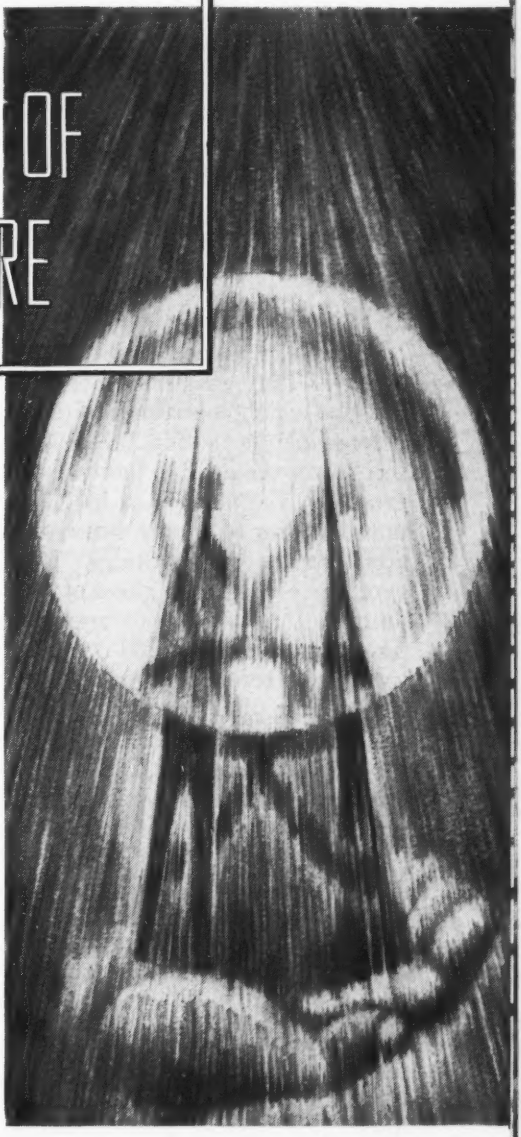
A major contribution of the Association is the sponsorship of a series of symposiums to bring together the Army and its civilian industrial partners thereby enhancing the mutual understanding and cooperation essential in national defense. During FY 1957 symposiums at the U. S. Army Air Defense Center, Fort Bliss, Texas, and at the U. S. Army Aviation Center, Fort Rucker, Alabama, were attended by about 300 civilian executives, engineers, and scientists in the missiles and aircraft fields.

In addition, the annual meetings of the Association, coupled with the establishment of regional organizations, further public understanding of the Army's role in defense. Local chapters are of particular significance since they permit year-round diffusion of information concerning Army activities.

In October 1956, the leadership of the Association was transferred from the active Army to the able hands of its civilian members in order to broaden its scope and to facilitate and encourage the growth of civilian membership. Thus, the Association will be able better to implement its responsibility of interpreting the Army to the public.

Since 1 July 1955 Association membership has increased more than 25,000 totaling in excess of 60,000. Newly organized local chapters total 32 representing 19 states, the Territory of Hawaii, Germany, and Japan. The progress achieved in these two areas mirrors the growing contributions of the Association to the United States Army.

VII. THE CHALLENGE OF THE FUTURE



THE future reveals clearly that the Army will continue its role of providing a maximum contribution to the deterrence of war within the guide lines set forth in its National Military Program. However, the Army will have to solve increasingly difficult problems in its efforts to balance its categories of military forces to meet, in order of priority, the requirements of cold war, limited war, and general atomic war.

There will be a continuing need for Army forces deployed in strategic areas overseas in sufficient strength and with an M-Day readiness in order to comprise an effective deterrent to limited and general war. As a visible ready-force to help deter war in any form and to provide the means to win a small war quickly if deterrence fails, the Strategic Army Forces also should be maintained at the present eight-division level with the necessary combat and logistical support units.

In addition to maintaining its overseas deployments and Strategic Army Forces at a high level of combat-readiness, the Army is faced with expanding requirements in at least two of its programs. The first is the Reserve Program. The Army must possess the capability of generating reserve strength as rapidly as it deploys active Army units overseas in the event of war. Consequently, the Army is placing increased emphasis on improving the

combat-readiness of its reserve forces. As a result of the benefits of the six months training program for National Guardsmen and Reservists, reserve units will ultimately be filled with trained men thereby reducing the time required to prepare these units for combat. However, to attain the essential levels of readiness for reserve forces requires increased expenditures for armories and training which must be provided from within an Army budget which is expected to remain at approximately its present level.

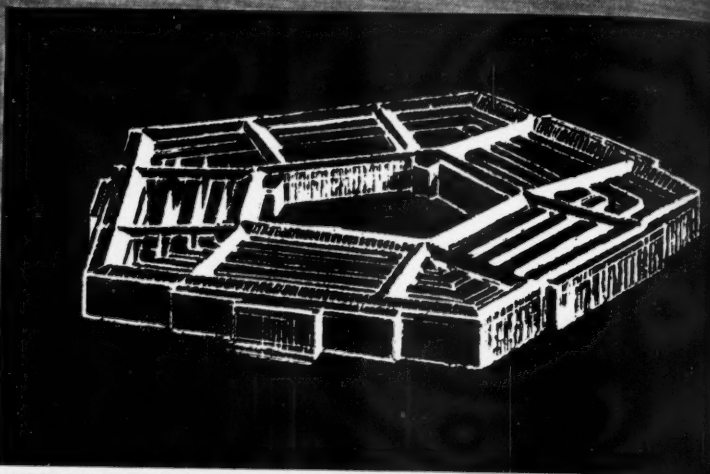
A similar situation exists with respect to the Army's surface-to-air missiles which contribute to the air defense of the Nation. The Army recognizes the need to increase progressively the number of its missile units in order to deter a surprise air attack on the United States. However, since the growing cost of these units, in terms of money and manpower, must be provided from relatively fixed resources, this contribution to the deterrence of general atomic war must be balanced with the need for flexible and mobile forces designed to cope with all possible forms of future conflict.

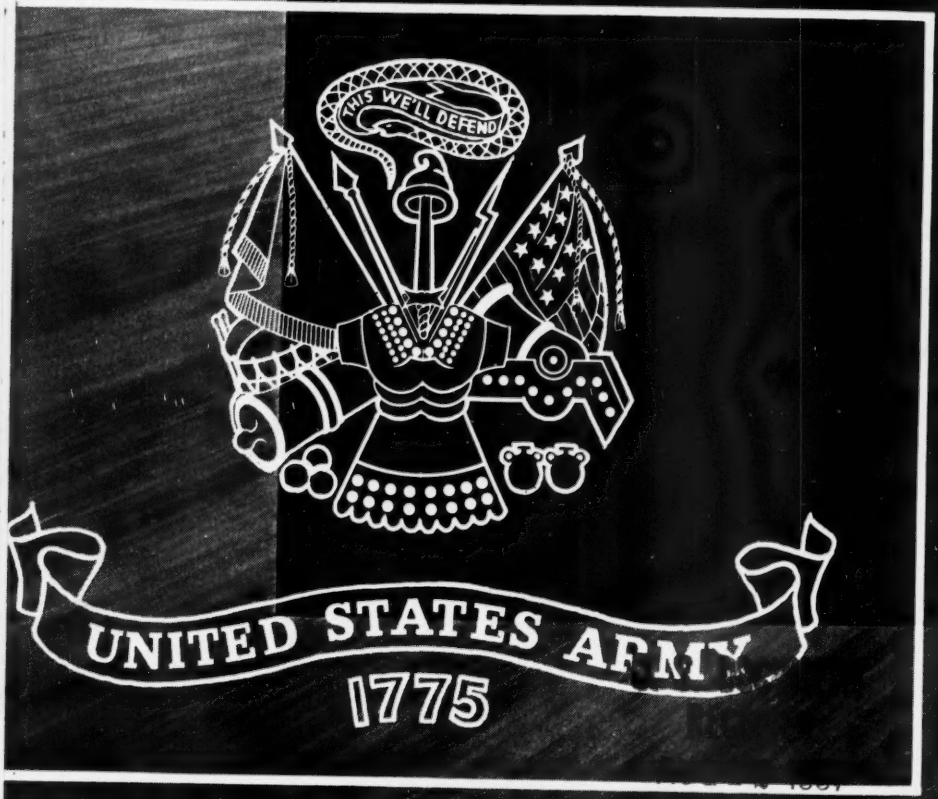
Structure-wise, the new Army divisions are adaptable to the anticipated conditions of future warfare. In addition, technological success is providing the Army with improved firepower, mobility, and communications which will permit the development of new tactics, techniques, and logistical procedures required to generate maximum effectiveness for the newly designed units.

However, to burden further the military planner, the finite resources available to the Army are a prime determinant of the rate and direction of modernization of Army forces. The Army is finding that the cost of new weapons and equipment is greater than anticipated. Also, if the Army is to retain highly skilled leaders and soldiers, higher military pay scales in the future are indispensable.

Thus, the expanding requirements of the reserve and air defense programs, the rising costs of weapons and equipment, and the need for increased pay scales coupled with the inflationary trend in the Nation's economy demand the most effective use of Army resources. If the Army is to live within its limited resources, it must be certain that it is placing "first things first" and utilize its dollars and its manpower for those activities which contribute directly to the deterrence of war and combat effectiveness on the battlefield.

During the period of this report, the Army has made significant progress in armament, organization, tactics, and administration. Much of this progress has been due to the able leadership of the Secretary of the Army, the Under Secretary, and their Assistant Secretaries who have shown deep insight in the manpower, logistical, fiscal, and military problems inherent in the administration of the Army. It has been fitly said that the Army can be no better than the men and women who compose it. Fortunately, the Army has attracted to its ranks a dedicated body of soldiers and civilians willing to undertake the challenging problems of shaping the modern Army and responsive to the appeal of a strenuous life fraught with heavy responsibilities for the security of the Nation.





THE U. S. ARMY—A KEY TO PEACE